

INSIDE DOPE

by GEORGE F. TAUBENECK

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Stories of the Week

Published George Harding of *The Michigan Investor* is showing to friends a telegram sent him by a client. Quote:

"Arriving in Detroit Wednesday. Please arrange hotel accommodations where I can put up with my wife."

While touring the astounding United States with a group of European businessmen, Monsieur Blanque was spirited away to a convivial party in a private home in Dayton, Ohio.

"This is my 30th wedding anniversary," confided his host, "and I just had to be here. I thought you might enjoy it, too."

"Je ne comprends pas. How do you say? Annee versaill, what?"

"I mean, this lovely lady has put up with me . . . lived with me through thick and thin . . . 30 years . . . we celebrate formally."

The Frenchman clapped his hands. "Ex-cée-lahn-tay! Now you marry her, eh?"

A Detroiter was entrusted with a hot-rod experimental Cadillac, on which he promised to keep performance data. After driving it at unbelievable speeds he stopped at a gas station for a refill and a checkup.

The attendant performed his duties, took a long gander at the strange new motor, and appraised the unprepossessing driver candidly.

"You're driving this job through to Florida for a General Motors VIP. I suppose. Could you use a few road maps?"

Add English Stories

According to one of our English subscribers, the election which returned Churchill to No. 10 Downing Street produced a first-class chuckle.

Mrs. Attlee drove husband Clement to all his campaign speeches. At the end of one day she was so tired she remained in their tiny auto.

"Sorry that Mrs. Attlee isn't here," apologized her husband. "She's sleeping in our car at the moment, but you all know that when the votes are counted, she'll sleep at No. 10 Downing Street."

"Oo wit?" piped up a Cockney. "Winnie?"

Add Washington Stories

Across the portico of the National Archives Bldg. on Constitution Ave. is a graven inscription:

WHAT IS PAST IS PROLOGUE. Washington cab drivers explain to curious sight-seers that those somber words mean, "you ain't seen nothing yet."

At the height of World War II, the Secretary of the Treasury advertised for an economist. Immediately the manager of a Maryland bank applied for the post.

Not realizing that said banker had sought it on his own, a political friend nominated this fellow for the job. His candidacy was accepted forthwith.

Weeks later, "through channels," the Marylander's application was rejected by a bureaucrat on the grounds that the job already had been filled. Whereupon our perplexed hero duly was notified of his turn-down (by slow mail).

With considerable embarrassment the Secretary of the Treasury discovered he had signed this silly letter himself!

Things Are Tough All Over

British beer barrel bungers met recently to consider a problem—the high price of bungs. The bungers are members of the Shive Manufacturing Co.

(Concluded on Page 6, Column 1)

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Norge Expands '52 Refrigerator, Range Lines

CHICAGO—An expanded line of major appliances, with two new refrigerator models, two new electric range models, and one new gas range model was announced by H. L. Clary, vice president in charge of sales for Norge, at the winter home furnishings market.

"Announcement of the expanded line is proof that Norge Div. is in the appliance field to a greater extent than ever," Clary said. Norge is attempting to hold the price line at this time, it was said, as no increases are being made on current Norge products.

The two new refrigerators are model 800 at \$249.95 and the 810 at

(Concluded on Page 2, Column 1)

New Westinghouse Air Drier Removes 3 Gals. Water a Day

SPRINGFIELD, Mass.—The Westinghouse Electric Appliance Div. has introduced a new electric dehumidifier that can remove from the air up to 3 gals. of water every day. The compact 2-ft. high cabinet-like device "will definitely help prevent molding and rotting in basements, rusting of tools in the workshop, swelling of doors and partitions in recreation rooms, and other nuisances that result from excessive moisture," it was reported by H. F. Hildreth, manager of the Westinghouse refrigeration specialties department.

The air drier also will prove valuable in a photographic dark room, bank vault, printing shop, candy factory, locker room, or other places

(Concluded on Back Page, Column 1)

'Island King' Highlights '52 McCray Case Line

KENDALLVILLE, Ind.—An island self-service refrigerated display case dubbed the "Island King" is one of three new cases included in the 1952 commercial line announced recently by the McCray Refrigerator Co. here.

The other new cases are a self-service frozen food display case with automatic defrost and a double-duty, mass produce merchandiser featuring a sliding door arrangement in the front of the storage base.

The line also includes improved models of self-service dairy display

(Concluded on Page 4, Column 1)

Service Firms Can Use Capehart Amendment

WASHINGTON, D. C.—The service trades, including refrigeration and appliance service, will now be permitted to apply for higher price ceilings under the Capehart amendment as the result of a recent ruling by the Office of Price Stabilization that takes effect on Jan. 14.

In Amendment 2 to CPR 34, the OPS has told service organizations that they may determine how much of an increase they think they deserve and submit their request along with reasons why they should have it. The OPS will then study the figures presented and judge whether or not the increase is justified.

Unlike Capehart adjustment for

(Concluded on Page 4, Column 5)

How Installers Can Get Rating For Scarce Parts

WASHINGTON, D. C.—Installers of domestic appliances, including television sets, are now covered by Controlled Materials Plan Regulation No. 7 and are permitted to use an RE priority rating to get materials needed for installation work.

They were brought under the regulation by an extensive amendment that took effect last Dec. 20.

The regulation defines an installation as "setting up or relocation of appliances, machines, or pieces of equipment . . . in position for service and the connection thereof to existing service facilities in an existing building, structure, or project."

Such installation is not considered to be constructed as defined in NPA order M-4A. The regulation adds:

"Where such setting up or relocation occurs in connection with the erection of or an extension to a building, structure, or project, it is not considered to be construction as defined in NPA order M-4A. The regulation adds:

(Concluded on Page 25, Column 3)

Hotpoint Shows 7 Complete Major Appliance Lines

CHICAGO—A new 11-cu. ft. home freezer one foot narrower than former models in this size and having a capacity of 385 lbs. of frozen food is being introduced by Hotpoint Inc. at the home furnishings market here.

The company also announced that its 1952 refrigerator line includes nine models headed by a combination refrigerator-freezer (model EG106) which has new door shelves giving greater capacity. The new models range from 4-cu. ft. under-counter units to combination types with a capacity of 10.6 cu. ft.

Hotpoint is also showing 1952 automatic home laundry equipment, electric water heaters in 10 models, food waste disposals, electric ranges, and dishwashers.

In addition to the new model

(Concluded on Back Page, Column 3)

Nance Says Appliance Plant Capacity Doubled

By George F. Taubeneck

CHICAGO—America's plant capacity for the production of appliances has doubled in the last six years, James J. Nance, president of Hotpoint, told a luncheon group here Jan. 7.

However, he observed ruefully, the industry's merchandising structure hasn't progressed at anything like a comparable rate.

Lest the business be caught with its plants down two or three years hence, Nance believes it will be necessary to recruit great numbers of

(Concluded on Back Page, Column 1)

Certain CPR Ceilings Postponed Till Feb. 20

WASHINGTON, D. C.—Manufacturers of certain new commodities and manufacturers starting in business after Jan. 1, 1950, who are unable to determine ceiling prices under the machinery ceiling price regulation (CPR 30) without applying to the Office of Price Stabilization, may

(Concluded on Page 25, Column 5)

Appliance Firms Presenting Full Lines at Mart Will Go 'Full Steam Ahead' As Long as Materials Are Made Available

CHICAGO—"We don't know how far we're going, but it's full steam ahead for as far as we can go."

That seemed to be the attitude taken by manufacturers of refrigerators, home freezers, room air conditioners, and other appliances at the annual winter home furnishings market which opened here Jan. 7.

This is what the situation looks like for 1952, gleaned from what was presented at the Mart, plus some "guesstimates" based on statements by NPA officials:

1. Manufacturers have developed new, full lines for 1952. Some lines include fundamental design changes and developments, such as the Kelvinator and Admiral defrosting systems, and the yet-to-be-revealed Frigidaire "Cyclo-matic" models. There has not been too much change in styling or exterior appearance, however.

2. Certain manufacturers' lines have not been constricted or condensed as much as was thought probable, although it is pointed out that there is a certain amount of "water" in the form of 1951 "carryover" models in some of the bigger lines shown by the manufacturers. However, with material restrictions being what they are, manufacturers will doubtless concentrate on their best sellers.

3. Both industry and government sources seem to feel that appliance producers will be able to produce up to the quotas permitted by the government, although these quotas may be cut a couple of more times as the defense program really gets into high gear. One exception may be ranges and other appliances that require nickel-bearing heating elements, because the aircraft program may demand ALL available nickel.

4. There has been considerable substitution for aluminum, in many cases by plastics. Apparently plastics will be in pretty good supply. Appliance manufacturers apparently won't have too much worry on steel. But copper, aluminum, and particularly nickel seem certain to be in short supply.

Most of the major producers introduced their new lines at the winter markets or shortly before. One of the major exceptions to this was Frigidaire, which will introduce its 1952 Imperial "Cyclo-matic" models at a nationwide series of 52 field meetings starting Jan. 30. Company officials say that the new models

(Concluded on Page 25, Column 1)

NPA Eases Rule on Late Delivery of CMP Metals

By George F. Taubeneck

CEDAR RAPIDS, Iowa—More than 400 distributor personnel, including all but one of the firm's 70 distributors, spent Sunday here and Monday in the fascinating Amana "colonies" to get the latest word on Amana Refrigeration's sales strategy for 1952.

Although 8 and 14-cu. ft. chest

models were introduced, Amana's emphasis again will be on its big uprights (12, 18, and 25 cu. ft.).

Ed Hinchliff and George Foerster laid special stress on comparative tests of nine leading makes of food freezers. Conducted by the Electrical Testing Laboratories, these performances

(Concluded on Back Page, Column 2)

10% Production Cut Seen For Appliances In April

WASHINGTON, D. C.—On the production front, three developments took place here recently:

1. Manly Fleischmann, head of the Defense Production Administration, told a Congressional committee that appliance production during the second quarter would be cut about 10% below present levels.

Defense Mobilizer Charles E. Wilson noted that this rate would still be comparable to that of the 1947 to 1949 period. Second-quarter allotments have not yet been announced.

(Concluded on Page 25, Column 3)

New Detroit Ordinance Adopts B9.1-1950 Code

DETROIT—Newly revised municipal refrigeration and air conditioning ordinance which became effective here

Jan. 2 adopts by reference for the first time the ASA B9.1-1950 Safety Code for Mechanical Refrigeration.

The local code has long been

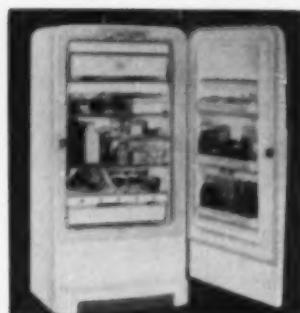
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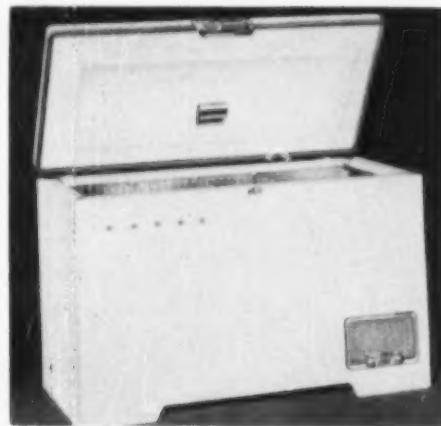
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Model E-88 range with Tele-speed.



Model 810 refrigerator.



Model HF-15 home freezer.

Norge Line--

(Concluded from Page 1)

\$269.95 retail. Both are more than 8-cu. ft. gross capacity and are in production, with delivery to distributors immediately.

Norge now has 10 models in its expanded refrigerator line. They are:

R-700	\$209.95
R-86	249.95
800	249.95
810	269.95
RSD-86	289.95
D-116	299.95
DE-86	319.95
DSD-86	359.95
DE-106	369.95
DSD-106	419.95

Models bearing the DBD and RSD designation are the self-defrosting units.

The new electric range models are E-88 at \$339.95 and E-90 at \$359.95 retail. They incorporate new "Tele-speed" heat indicators and "Pick-A-Pan" storage compartments.

Telespeed works as follows: When any top element is turned on, a miniature reproduction of it on the back panel lights up, indicating which of the seven cooking speeds is being used.

The new Pick-A-Pan storage feature consists of slide-out racks with hooks for utensils plus shelves on the doors for condiments and kitchen tools.

Production of the new range models got under way in December at the Effingham, Ill., range plant. The complete Norge electric range line now consists of the following models:

E-2A 20-in. apartment range	\$169.95
E-10 38-in. left cluster	199.95
E-64 38-in. left cluster	279.95
E-66 38-in. left cluster automatic deluxe	309.95
E-77 38-in. divided or twin-top model, automatic	329.95
E-88 38-in. left cluster automatic with Telespeed	359.95
E-90 38-in. divided top, automatic with Telespeed and Pick-A-Pan	359.95

The new gas range, to be known as N-19, is a "certified performance"

gas range, which will go into production in February at the Effingham plant. It bears the "CP" designation of the Gas Appliance Manufacturers Association and incorporates automatic lighting features for oven and burners.

The Norge gas range line now consists of 10 models as follows:

N-2 20 in. apartment size	\$99.95
N-3 36 in. center cluster	129.95
N-406 38 in. left cluster	159.95
ND-386-A 38 in. divided top	169.95
ND-386-B 38 in. divided top	159.95
N-11 38 in. left cluster	179.95
N-15 38 in. divided top, automatic	199.95
N-12-TLC 38 in. left cluster	224.95
N-16-TLC 38 in. divided or twin top deluxe	244.95
N-19 38 in. divided or twin top	269.95

There are three new home freezers bowing in the Norge line. They are:

HF-80 8 cu. ft.	\$349.95
HF-150 15 cu. ft.	489.95
HF-230 23 cu. ft.	659.95

Home freezer prices have not been increased over last year's levels.

While no new washers were announced at the winter market, since the "Time-Line" automatic AW-422 was brought out at the summer show, it was noted that for some time Norge has had no inventory on this new model.

First-quarter production of the entire home laundry line is already sold out. The "Time-Line" has been on allocation since its introduction last July.

The conventional, or wringer washer line of Norge now consists of the following three models, in addition to the "Time-Line" automatic:

CW-230	\$118.95
CW-240	139.95
CW-250T	149.95

Prices of the conventional washers are retail, and are without pump. Wringer washers equipped with pump are \$10 additional.

The Norge electric water heater line remains unchanged. There are 33 models in the line, available in round and table-top style, ranging in size from the 20-gal. capacity model 61-208 at \$89 to the 82-gal. size, model 61-82D at \$172.

New, Multi-Purpose, Dependable, Fully Equipped!

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Uniqued for pressure-testing lines, blowing out coils and condensers, inflating tires, extinguishing fires. Equipped with fire-horn, connecting hose, fire adapter, rare adapter, standard CO₂ charging connection for easy refilling. Durable, safe, economical 5 lb. CO₂ capacity. ICC 3AA-1800 Cylinder.

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Design-Engineered for Rugged Service

Admiral Lists Prices For 1952 Range, Refrigerator Line

CHICAGO—Price lists for its 1952 series refrigerators and ranges have been announced by Admiral Corp.

Details on the company's new products were described in the Jan. 7 issue of the NEWS.

The price lists follow:

Refrigerator Model	Price
712	\$199.95
752	229.95
772	259.95
962	279.95
972	309.95
982 (Flash defrosting)	339.95
1162	339.95
1172 (Flash defrosting)	369.95
1182 Automatic defrosting	399.95
1192W (Dual-Temp)	469.95
1192 (Dual-Temp)	479.95
1292W (Two door Dual-Temp)	499.95
1292 (Two door Dual-Temp)	519.95

Range Model	Price
W-1	\$289.95
W-2	349.95
W-3 (Double oven)	399.95
Rotary roaster optional on all models	25.00

Davidson's ToHandle I-H

DES MOINES, Iowa—Davidson's Department Store here has been appointed an International Harvester refrigerator dealer, it was announced by H. C. Kruse, I-H district manager for the Des Moines territory.

Gibson Adds 2-Oven Range To Retail for \$329.95

"Insulation on all sides of both ovens keeps heat in," he noted. "Oven lights automatically illuminate both ovens when doors are opened."

Over-all, the model "J" has a steel one-piece structure, acid and chip resistant porcelain on all exterior surfaces, and built-to-floor cabinet with 4-in. recessed toe space.

Two storage doors glide on nylon roller bearings to provide more than 3-cu. ft. of storage space.

Floor, Wall Furnaces Covered by Reg. W

WASHINGTON, D. C.—In two new interpretations of Regulation W, the consumer credit regulation, the Board of Governors of the Federal Reserve System explained that:

1. A floor or wall furnace that transmits heat to a room from a recess in which the furnace is located and which is installed as a permanent part of the realty, is covered by Reg. W when sold for installation in an existing residential building. Such a furnace is not considered to be a space heater for purposes of the regulation.

2. A bank or finance company purchasing or discounting an instalment obligation arising from the sale of a listed article is not required to check the applicable maximum retail price to verify that the price charged for the article is less than the ceiling price. However, if the financier has any other reason to believe that the credit exceeds the maximum credit value, he must act upon that information.

Economical "Freon"-Charged Provides Zoned Air Conditioning in Texas Office Building

Clean-cut, modern design of Perry-Brooks building made possible by air conditioning throughout.



The Problem. When owner-builder E. H. Perry, Sr., planned the modern 12-story Perry-Brooks building in Austin, Texas, he well realized the value of year-round, summer-and-winter air conditioning. In discussing construction details with the architectural firm of Kuehne, Brooks and Barr & Associates, it was agreed that a zoned air conditioning system installed as an integral part of the structure would prove both an economic measure and far more satisfactory than the assembly of equipment in various "leftover" areas.

The Solution. Further round-table consideration of specific requirements prompted the air conditioning contractor—Climate, Inc., Austin—to recommend design of a well-zoned system based entirely upon installation of "package units." It was explained that this could be done at comparatively low cost and without in any way sacrificing quality or operating efficiency.

The proposed system called for thirty-six zones; three to a floor in north, south and central locations of the structure. It was determined that these zones would adequately provide conditioned air throughout the 300 rooms occupying 64,000 square feet of floor space.

The Installation. Specially designed equipment rooms, constructed on each floor, house a total of twenty-three 5-ton Worthington "Freon-12," and seven 7½-ton Worthington "Freon-22" "package units." These are factory-assembled machines of standard commercial type . . . compact, clean and quiet. Combined, the installation totaled 132½ tons of refrigeration and is designed to provide economical cooling, dehumidification, ventilation, circulation, cleaning and heating of air.

Zoned cooling control is through a standard off-fan-cooling switch furnished with

Photographs: Courtesy Worthington



Westinghouse double-oven Commander deluxe range introduced at the January Chicago Mart.

Westinghouse Introduces Double-Oven Range At January Mart; More Ranges Due In March

MANSFIELD, Ohio—A new deluxe double oven electric range, heading the company's 1952 line, was shown at the January Chicago market, it was announced recently by R. M. Beatty, manager of the range department, Westinghouse Electric Appliance Div.

Called the Commander, it retains the deluxe features of the 1951 line with refinements in style and design. The price of the new range, model AC-774, will be announced at a later date.

The new double oven range, Beatty pointed out, will be in limited production, because of material con-

ditions, and will be available for selective distribution. The balance of the new range line will be introduced in March.

The Commander features the "Super Corox" unit that comes to a red hot heat in 30 seconds for fast-start cooking operation; the "Two-Level" speed cooker for either deep well or surface cooking; the "Miracle Sealed" oven with Fiberglas heat guard seal which permits baking on any rack position; and "Color Glance" rotary controls with different colors for each selected heat.

The second and slightly smaller oven also has the heat guard seal and

provides for extra baking, roasting, and broiling capacity. It operates independently of the larger oven and permits the use of both ovens at different temperatures simultaneously.

Bright metal trim and color highlight the style features of the new Commander. Color is featured in the automatic electric timer, oven controls, and, of course, the Color Glance surface controls.

The massive appearance of the new range is accentuated by drawer-width handles on the ovens and storage drawers. New front bands on the oven racks add beauty to the oven interior and give greater ease in handling hot oven racks.

Other features of the double oven Commander include a new electric timer, new electric minute minder, two automatic appliance receptacles, and two full-sized aluminum storage drawers. In addition to the Two-Level speed cooker and the Super Corox 6-in. unit, the Commander is equipped with another 8 and another 6-in. unit for surface cooking.

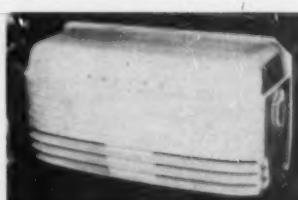
Reg. W Violation Costs St. Paul Dealer \$1,000

ST. PAUL—Walter Lange of Lange Television Sales here was recently fined \$1,000 and sentenced to six months imprisonment for violating Regulation W, the consumer credit control regulation.

The United States District Court here then suspended the prison sentence and placed Lange on probation for three years. It also placed his sister-in-law, Charlotte Lange, who operates the business, on probation for a year and a day.



Philco Model 925 with Dairy Bar.



Philco Air Conditioner Model 33-HL.

models are equipped with adjustable shelves. The interior design has been restyled, and chiller trays and crispers feature a glacier blue-green translucent color.

Single-door models 726, 925, 925L, 1125, and 1125L are equipped with door shelves and adjustable shelves. Models 923 and 923D have door shelves, while model 1124 comes with adjustable shelves.

The three two-door models (in 8, 10, and 12-cu. ft. capacities) feature automatic defrosting and adjustable shelves.

Tentative refrigerator models and prices were announced as follows:

Single-Door Model	Cu. Ft. Capacity	Price
723	7.2	\$209.95
724	7.1	239.95
726	7.1	259.95
923	9.2	259.95
923D	9.2	289.95
925	9.4	329.95
925L	9.4	334.95
1124	11.1	339.95
1125	11.2	369.95
1125L	11.2	379.95

Two-Door Model	Cu. Ft. Capacity	Price
828	8.2	\$349.95
1028	10.1	399.95
1228	12.1	459.95

Commenting on the freezer line, the company said that "through surveys conducted by independent market research companies, it was found that the 12 and 8-cu. ft. freezer sizes accounted for over one half of the total freezer business."

Philco has added in the newly-designed electric range line a new "Quickset Timer," designed to simplify automatic cooking. Priced from \$189.95 to \$419.95, the line includes nine models, eight of which now have the previously-introduced "Broil-Under-Glass" feature.

The company's 8 and 12-cu. ft. chest freezers have been given new color treatment, being enhanced with what is called "soft Key Largo green." They carry prices of \$325 and \$399.95, respectively.

CONSERVE MATERIALS

In announcing the new models, Carmine said they are "designed to conserve critical materials while achieving the highest standards of Philco quality." He added that Philco intends to "broaden the market for our lines and bring them within the reach of the volume market."

The $\frac{1}{2}$ -hp. air conditioner was described as "both mass priced and filling the growing need for cooling smaller sized bedrooms, dens, offices, etc."

Commenting on automatic temperature control, the company said this development "minimizes the possibility of the temperature dropping too low in the room if there is an excessive change in the weather."

The automatic temperature control is not just a single step reduction cooling effect, but is designed to progressively reduce the cooling effect as outdoor temperatures decrease without the annoying effect of the compressor turning on and off. It includes an adjustable thermostat which can be set by the user to fit his own individual comfort."

The grilles on all models have been changed to permit the air stream to be directed up, down, to the left, right, or any combination of these to suit the furniture arrangement of the room, it was pointed out.

The cheese keeper in the refrigerator Dairy Bar is designed to keep cheese "store-fresh" for weeks in the tested manner recommended by the U. S. Department of Agriculture. Philco said that tests have proven, it was stated, that the cheese keeper preserves flavor and prevents moisture loss and mold growth for long periods of time.

"The cheese keeper," the company explained, "is an enclosed compartment at the base of the Dairy Bar, so constructed that the cheese is placed on a raised platform beneath which is a spongy material that the user saturates with a cheese keeping solution."

External design of the 1952 refrigerators carries out, according to Philco, "a sweeping modern look." New handles have been added to enhance the over-all appearance.

Every model has a built-in horizontal freezer locker, and many

FEATURES OF RANGE LINE

Eight of the nine ranges, including an apartment size model, have the Broil-Under-Glass feature. Also, four of them incorporate in their design the Philco built-in Jiffy Griddle—a unit that slides out of the range and utilizes the heat of the broiler element for surface cooking.

Some models have color controls, and most of the ranges include a large "banquet" oven with "fully insulated" walls.

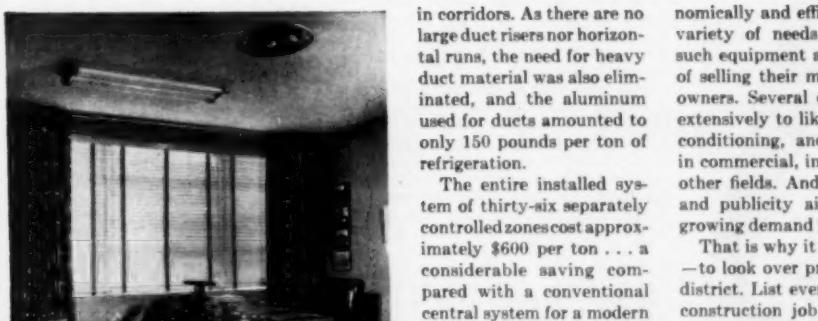
Range prices were announced as follows:

Model	Price
223 (Apartment size)	\$189.95
421	209.95
422	229.95
423	269.95
423D	289.95
425	319.95
427	379.95
428 (Two ovens)	419.95

Drogosch Named Detroit Chief Safety Engineer

DETROIT—Confirmation of the appointment of Frank Drogosch as chief safety engineer for the city of Detroit was announced here recently. Drogosch has been acting chief safety engineer since the resignation of John C. Rehard from the post last October.

Rehard left to join the National Board of Boiler and Pressure Vessel Inspectors as assistant to C. O. Myers, secretary-treasurer.



Executive offices have individual air discharge outlets effectively installed in plenum ceilings.

the units. Heating control is pneumatic, by means of a 3-way valve at each hot-water coil—as shown in photo in right-hand column. Each of the units contains a two-row heating coil. A cast-iron hot-water boiler, induced draft cooling tower and two Worthington condensing water pumps are located on the roof of the building. Hot-water piping is insulated only on the roof outside conditioned areas. Elsewhere, pipe heat-loss is picked up by conditioners in the equipment rooms.

Air distribution is through C-1 Anemostats. There are no return-air or fresh-air ducts in the system. Fresh air is taken in at each equipment room through manually controlled louvers. Air is returned to the units by way of plenum ceilings equipped with air grilles, and there are single flapper valves in the ceiling of each office. The supply air duct on the top floor is insulated, but on other floors similar ducts are surrounded by return air flowing through the plenum ceilings. No door grilles are used, eliminating noise and drafts.

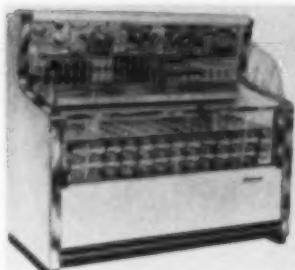
Pump and Machinery Corporation



"FREON" SAFE REFRIGERANTS
"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon refrigerants.



Island King Model GR-54



Model GP-6 Frozen Food Case



Model GO-11BS Double Duty Produce Case

'Island King' Highlights McCray Line--

(Concluded from Page 1, Column 8)
Island self-service meat display cases, service-type poultry and fish cases, and service-type meat display cases.

The Island King, also known as the model GK-54, occupies an area of only 11.25 sq. ft. and is intended to serve as a "second exposure" sales counter for merchandise already displayed elsewhere in the store. It is particularly adaptable for such items as eggs, ham, packaged cheese, fresh fruit, fresh packaged meats, poultry, and other dairy products.

The table-height case measures 54 in. long, 36 in. deep, and 41 in. high. Depth of the display section is 13 in. It offers 13.4 cu. ft. of refrigerated selling space that may be approached from all four sides.

The exterior of the lower portion of the case is white baked enamel. The base is black porcelain and has a stainless steel bumper rail. The display area has two-glass Thermopane sections on four sides, finished with

an anodized aluminum protective molding.

The interior of the display area has anodized aluminum shelves, removable for cleaning. There are no baffles.

Cooling is by means of McCray "Koldfog" self-contained refrigeration. No drain or drain connection is needed as the condensing unit provides for its own re-evaporation of water condensed from the air.

Two temperature ranges are possible: normal temperature for dairy products and smoked meats, and low temperature for pre-packaged chickens, packaged fresh meats, etc.

A floodlight with canopy and price tag molding, and smooth rolling casters are available as accessories.

The Island King received its name from Norman Hilborn of the South Bend Fixture Co., McCray distributor in South Bend, Ind. He entered that name in a \$100 prize contest which drew nearly 300 entries.

The frozen food case is known as the model GP-6 without superstructure and GP-68 with superstructure. It measures 71 1/2 in. long without ends and 78 1/2 in. long with ends. It is 37 in. deep and 45 in. high without superstructure. With superstructure it stands 65 1/2 in. high.

The case has a capacity of 14.6 cu. ft. or 654 standard 5 by 4 by 1 1/2 in. frozen food packages. It can be used as an individual unit, as an auxiliary to larger models, or in multiple installations.

McCray's new automatic defrosting in this equipment assures periodic defrost with a minimum of temperature rise during the defrost cycle. A uniform blanket of sub-zero air completely covers the displayed products.

The case has a dial thermometer and thermostat mounted in a white baked enamel housing at the back of the display section. The user may set the controls to obtain desired case temperature for products displayed.

The wood-steel case has a steel inner and outer shell with 4 in. of corkboard insulation. A four-glass section of Thermopane, 16 in. high with stainless steel cap, forms the front of the display section. Condensation is kept from forming on the

front rail by a heater wire under the stainless steel cap.

Fluorescent lighting in the superstructure illuminates the display and the five display cards in the superstructure showing colored illustrations of prepared food dishes. A multiple price tag rail with McCray 4-in-1 aluminum tag molding is mounted on the forward edge of the upper display shelf.

The forming of condensation on the tag rail in humid climates is prevented by a heater wire beneath the rail.

The case is finished in baked white enamel and white porcelain at such points of hardest wear as, for instance, the front panel and the top of the GP-6. A bumper rail of black porcelain with stainless steel trim strip protects the front from damage by shopping carts.

Removable panels in the display floor sections give access to the expansion valve and motors. A tempered plate glass baffle is located inside the front of the display section.

The double-duty mass produce merchandiser, called the GO-11BS, is designed for end to end installation with McCray model GY-11B single-duty produce cases or with McCray model VC-11BS non-refrigerated produce cases.

"High angle" mass display was achieved in the case, the company said, by setting the full 36-in. adjustable shelf sections in the display area at an 80° angle to the large non-fogging mirror (which has a five-year guarantee against deterioration). The display thus gives the appearance of having a width of 6 ft.

The telescoping shelves are adjustable to seven positions; four at the rear of the display and two at the front. High or low positions of the shelves permit deep or shallow display.

Floor of the display section is black porcelain, has rounded corners, and drains into a trap below. Four large sliding doors are in the storage base. Each of them is large enough to accommodate a basket of produce or a crate of lettuce. There are no shelves in the storage section—nothing to interfere with crate storage. Rust resisting rollers behind each storage door aid in loading and unloading of crates.

The storage base also has a black porcelain floor. The doors may be lifted out to facilitate cleaning.

The exterior finish of the case is white baked enamel and porcelain at points of hardest wear, with stainless steel trim. Service connections in the recessed toe space are concealed by a black porcelain detachable panel.

Fluorescent lamps are located at the upper edge of the mirror. An opening above the lamps permits illumination of departmental or promotional signs above.

The case is of wood-steel construction with steel inner and outer shell and heavy Fiberglas insulation. It measures 11 ft. long without ends and 11 ft. 6 in. with ends. It is 46 1/2 in. deep and 73 1/2 in. high. Display area is 33 sq. ft. with a volume of 27 cu. ft. or 34 bushels.

Accessories available include the McCray 4-in-1 price tag molding for attachment to the upper edge of the mirror; a spray attachment consisting

of water cooling coil section with 8 ft. of flexible hose and snap-on adapter at front center of display section; and a partition of 1/4-in. plate glass to separate refrigerated from non-refrigerated units.

Another case in the McCray 1952 line is the GI-6A case, which is a development of the former GI-6. It can be used for dairy products, vegetables, or meats. It has more display area and greater capacity than its predecessor. Milk can be stacked two cartons high on the lower shelf which is adjustable to three levels.

It has a larger than average drain to make it easier to clean. When lower shelf is removed, case can be flushed out with a hose. Glass in end panels can also be removed.

Model GI-6AT, designed for pre-packaged fresh or luncheon meats, has a two-glass Thermopane in front.

The GR-8A and GR-11A open type meat display cases are the result of restyling the previous GR line. The new models have the same general specifications as the former GR's except that they have a newly designed front which will harmonize with the GS line of cases and a new type of guard rail.

Models GM-8A, GK-8A, and GK-11A, companion service models for merchandising meats, poultry, and fish, are said to have a newer and more attractive design than their predecessors.

Service Prices--

(Concluded from Page 1, Column 2)
miles for manufacturers, the service trades are not asked to supply exact cost figures. OPS did not think they could supply them.

Under the Capehart amendment, businessmen can ask for increases to their ceiling prices to cover all reasonable cost increases up to last July 26. These added costs are to be applied to the highest prices charged during the first half of 1950.

At the same time, OPS eased the requirement for applications for relief. Now, service firms may apply for relief from price ceilings if those ceilings threaten the "effective operation" of their business. OPS will decide what relief shall be granted. Applications should be made to local district OPS offices.

Before, service firms had to be in danger of going out of business before they could apply for relief. And then only enough relief would be granted to permit the firm to remain in business.

CMP Regulation 1--

(Concluded from Page 1, Column 4)
materials in his production than he is allotted for that quarter. He can only draw upon his inventories to supplement the allotment when expressly permitted to do so by NPA.

3. That, beginning in the second quarter, a small user of controlled materials previously authorized to self-certify his own allotment, cannot so self-certify if he uses more of any one of the controlled materials than his average quarterly use for the same class during 1950.

HERE'S HOW YOU BENEFIT...

LOWER ACCOUNTS RECEIVABLE
"BRAND NAME" FINANCING
FAST CREDIT APPROVAL
EXTRA SELLING TOOL
NATIONWIDE FACILITIES



HERE'S HOW YOUR CUSTOMERS BENEFIT...

IMMEDIATE POSSESSION
TWO TO THREE YEARS TO PAY
REASONABLE RATES

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...celebrating 20 years of serving
America's finest food stores



COLDISPLAY 51' All Purpose Case (Illustrated)

... ONE OF 62 MODELS AND SIZES

Bally CASE and COOLER CO., Bally, Pa.

Giving 'Free Services,' Letting Housewife Keep Traded-In Washer Builds Goodwill

ST. PAUL.—Constantly developing one clever promotion after another to focus attention on his appliance dealership has won a lot of attention, and with it profitable sales volume for Luke Tieso, president of Tieso & Kostka Electric Co. here.

Currently doing a volume of \$1,500,000 per year, Tieso is only 34 years old. He began his appliance merchandising operation back in 1945. Now operating a string of stores throughout the twin cities, he feels that good solid operating techniques, such as skillful salesmanship, excellent service departments, and good products, will succeed only if something sensational attracts the public's attention to begin with.

Tieso's foremost gimmick is a series of "free services" which are available to any twin city homeowner. Under the plan, Tieso and Kostka furnishes free estimates on house-wiring, whenever a homeowner calls in and asks for it.

Carrying out this type of service may seem unusual, inasmuch as the firm does not handle electrical contracting work. However, the house is usually wired for the benefit of electrical appliances, as well as the lighting system—and the St. Paul dealer gets first call.

He also provides free estimates on kitchen remodeling costs, provides an expert draftsman and designer to do the planning if the housewife wishes, and wins a lot of kitchen sales in the \$2,000 plus range.

The firm deliberately keeps its service and repair prices as low as possible, because Tieso has found that nothing builds goodwill faster, or more solidly guarantees that the customer will come around to his store for new appliances.

While the above are all day-in, day-out goodwill-builders, Tieso uses

a lot of stunts. Recently, when the city celebrated "Centennial Days," he released scores of tiny rubber balloons, filled with helium gas, each containing a ticket, entitling the discoverer to a small appliance.

Scores of toasters, waffle irons, sandwich grills, and coffee makers were given away. Every resident of the area was keeping an eye out for the tiny balloons in the sky.

Another surprise stunt which constantly builds goodwill, is to offer the automatic washing machine customer an allowance for her old machine. When the sale is consummated, give her back the conventional washer.

The housewife is invited to keep the old machine, to use it for light loads which do not need the automatic washer's full capacity, and as a "standby." Needless to say, women are always gratified by this apparent gift and Tieso & Kostka is saved the job of reconditioning and reselling.

"House Wiring Under the Controlled Materials Plan." Speakers will

National Adequate Wiring Conference Scheduled for Chicago Jan. 24 and 25

CHICAGO—The 8th National Adequate Wiring Conference will be held at the Conrad Hilton hotel here Jan. 24 and 25, immediately following the close of the Home Builders' convention.

Lyle N. Foster, member of the Plan Committee of the National Adequate Wiring Bureau and a director of NECA, will serve as general chairman.

Among the talks on the program will be: "Possibilities and Problems Connected with the Use of Aluminum for House Wiring," discussed by R. W. Wilson, chairman of the EEI Wiring and Specifications Committee and a member of the National Adequate Wiring Bureau's plan committee; D. G. Kimball, manager of engineering, Wiring Device department, General Electric Co.; and a representative of the wire and cable industry to be selected.

"House Wiring Under the Controlled Materials Plan." Speakers will

include M. E. Mentzer, Adequate Wiring field representative, Rocky Mountain Electrical League, Denver; C. B. Osborne, sales manager, Electric Power Board, Chattanooga; B. O. Bowlin, secretary, Greater Toledo Adequate Wiring Bureau.

The Certified Adequate Wiring Program, Texas Style"—analysis of an outstanding program as operated in Dallas. Details will be presented by Robert Douglass, home service manager of the utility and W. H. Goldsmith, Adequate Wiring representative.

In addition, there will be several leading residence builders.

"I Make Money Selling Adequate Wiring"—Quentin M. Johnson, electrical contractor of Fargo, N. D. "Wiring Services for Rural Electrification Co-op Members"—K. R. Martin, manager, Wild Life Electric Cooperative, Mahnomen, Minn.

There will be an open forum discussion on ways and means of meet-

ing problems presented in adequate wiring promotion. Simultaneous round table question-and-answer forums to which conferees will bring specific questions on various phases of the adequate wiring program will also be held.

Subjects for discussion at each of four round tables will be: Administrative problems and policies; promotion and education; publicity and displays; and standards and certification.

A special luncheon on Thursday to be addressed by a leading industry figure, a social hour, and other features will complete the 2-day program.

Nashville Appliance Dealers Sell 1,134 Units In November

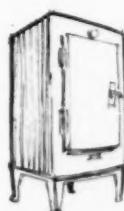
NASHVILLE, Tenn.—The Nashville Electric Service reports that major electric appliance dealers here sold a total of 1,134 appliances during November.

Following is the breakdown: home freezers, 41; refrigerators, 302; water heaters, 429; and ranges, 362.



First there were ice houses

...then there were ice boxes



...then there were automatic refrigerators



...and now the sensational new **Cyclo-matic Frigidaire** for 1952

It's coming soon - It's on the way...
watch for the big announcement day!



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WATER-COOLED
CONDENSERS**
More Efficient Double-Tube
Counter-flow Design



Acceptance in the field is rapidly changing to "Demand" for these efficient, more economical Cleanable Water-Cooled Condensers. Owners and service men prefer the "new unit" efficiency that can always be maintained by a simple cleaning process. Brass headers, machined and brazed.

Write for Catalog and Prices
WHOLESALE IN PRINCIPAL CITIES
Halstead & Mitchell
BESSEMER BLDG. PITTSBURGH 22, PA.



Concluded from Page 1, Column 1:
Brewery Association. (Bhine is a trade name for a bung, the wooden plug in a beer barrel.)

President W. P. Beach mourned that the price of wood for bungs has gone up more than 800 per cent since 1939. Bhine's use about 3,000 tons of timber a year to meet brewers' needs because, he explains, "a bung is needed for every bunghole."

Smart Salesman

Noble Sentiments

York Dealer Joe Kinsey sauntered down Main Street in Nacogdoches, Texas. He pulled up in front of a retail store which emblazoned an "Air Conditioned by York" blue shield sign on its front door. That sign hadn't been there the day before, so Joe probed into the situation.

He found that the merchant had bought a second-hand door for his establishment, and had neglected to remove the sign.

Being a bright salesman, Kinsey got busy and converted the phony sign into a handsome order which made the proprietor an honest man.

Future Pentagon?

A first-class mystery currently is developing around a 14-acre cave near Atchison, Kans.

Last July the cave officially was retired from the refrigerated storage business when its rooms were emptied of some 16,000,000 lbs. of dried eggs (which were handed over to Great Britain). The U. S. Agriculture Department has been maintaining said cave since on a "stand-by" directive.

Not long ago the Dept. of Agriculture passed on management of the mysterious Kansas cave to "another" government agency.

All attempts to learn the name of the new bureau so far have failed, although a columnist has declared that the cave's facilities are earmarked "Top Secret."

The Army Quartermaster Corps has declined to comment on the transfer, leaving us to speculate.

Could this cave be the atom-bomb shelter Pentagon?

From Our Mailbag

E. I. du Pont de Nemours & Co., Wilmington 98, Dela.

Editor:

I read the NEWS rather regularly, particularly the editorial comments. Your recent editorial on "Trade-Ins" included a thought that I expressed some years ago. I would like to say that the dealer who does not wish to have an old refrigerator kept by the buyer of the new one stopped thinking too soon or perhaps has no refrigerator of any kind in his own home.

Anybody who has a house with enough space to accommodate a second refrigerator will find it extremely convenient. If it is located in the cellar it will be very cheap to operate.

After a man has become accustomed to the convenience of a second refrigerator he will not give it up to his daughter or son even if he marries off a dozen of them. He will prefer to make the down payment on a new box so he can keep the one in the cellar.

I venture to say that a family who has purchased a new refrigerator during the past three or four years is not considered to be a good prospect for a new one. Such a person is, however, an excellent prospect for so-called "Trade-In."

As you say, some refrigerators will run almost forever. Actually, there is no reason for a large family not to have three refrigerators.

N. C. COOPER

131 Public Square
Clarksville, Tenn.

Editor:

This is the 25th renewal without missing a year since your paper was started. Yours—a job well done.

MATT KIRK

Chrysler Corp.
Detroit, Mich.

Editor:

Upon receipt of my NEWS, usually my first glance is at "Inside Dope." I have also just finished reading my secretary's copy of your book, "You'll Love This One."

Today I had reason to think of your column and its many clever, spicy stories. I am preparing to send an assistant to the Belgian Congo for a visit to three new distributors. He is not too enthused about the prospects. Today he came

into my office and said:

"In view of the fact that I'm leaving soon for the Belgian Congo, I thought perhaps you would be interested in the only story I've ever heard about the place:

"It seems an Export 'traveller' returned to his home-town after an extended stay out of the U. S. He went directly to the town's best department store and asked for a pair of black sheets and pillow-cases. The store, trying to oblige, tried to purchase these items from their supplier but were told that black sheets were simply not available.

"They phoned our 'world traveller' and told him they could not buy the black sheets and they were arranging to have a pair of their best Pepperell's sent out and dyed black for him. Our traveller thanked them quite profusely and was about to hang up when the department store representative asked: 'Pardon, sir, but why do you insist on having black sheets? Wouldn't blue, brown, green, or red do just as well?'

"'No,' said our friend, 'I've just completed three years in the Belgian Congo and I've seen so many black women on white sheets that I want to see what a white woman on black sheets looks like!'

Made for YOUR job!

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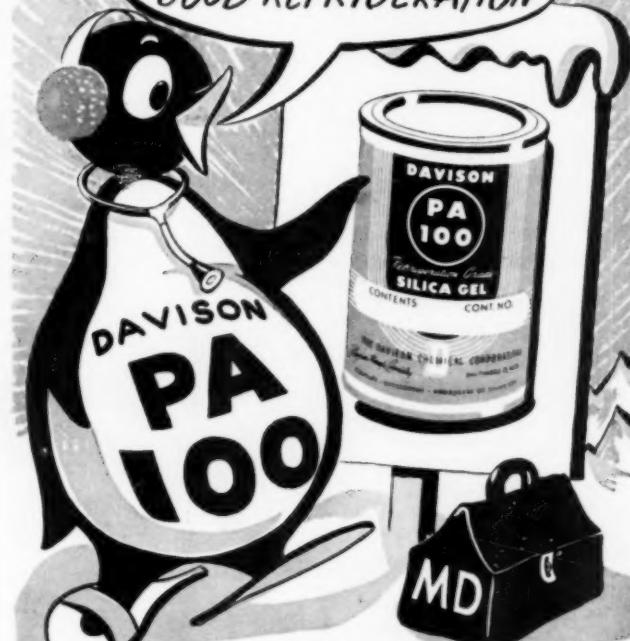
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ROME EXTENDED SURFACE HELICAL FIN TUBING comes in many sizes. Fins are solder bonded for permanent integral contact. For refrigeration condensers, blast air cooling or heating coils, inter-coolers and after-coolers, dry cleaning recovery coils. Write for details.



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Prescribe PA-100 for your moisture problems. Available from your jobber in cartridge or bulk can.

Progress through Chemistry
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PRODUCERS OF CATALYSTS, INORGANIC ACIDS, SUPERPHOSPHATES, PHOSPHATE ROCK, SILICA GELS, SILICOFLUORIDES AND FERTILIZERS

See for size, the Sporlan Catch-All with its scientifically molded porous cylinder offers the greatest filtering area because its end surface is augmented by its complete cylindrical surface into a tri-dimensional filtering area, filtering out any foreign matter as minute as 9 microns with negligible pressure drop!

Sporlan Catch-Alls are activated to the highest degree of dryness after they are completely assembled by subjecting them to a temperature of over 500° F. for a minimum of four hours! The Sporlan Catch-Alls are then sealed with moisture proof seals to prevent any loss of activation before installation.

When you want perfectly clean, perfectly dry refrigeration systems . . . install

SPORLAN Catch-Alls

the perfect filter-driers and GET PEAK PERFORMANCE ON ALL INSTALLATIONS

Catch-Alls are available in all sizes at all Sporlan wholesalers



AND HERE ARE 5 ADDITIONAL EXCLUSIVE CATCH-ALL FEATURES

1. They cannot powder!
2. They cannot pack!
3. The refrigerant cannot channel around the desiccant!
4. The unique, porous Catch-All cylinders are molded of minute particles of a highly efficient desiccant, the efficiency of which is greater than that of the same desiccant in granular form.
5. They dry down to a low end point . . . a point so low that any remaining moisture is absolutely harmless!

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Miracle of Refrigeration**It Helps To Ease, Preserve Life Itself; Laboratories Depend on It for Wonder Drugs**

OMAHA, Neb.—The national defense effort, coupled with the rapid growth of demand for the so-called "wonder drugs" in all walks of life, has skyrocketed the processing of glands from animals slaughtered in Omaha packing houses which have led the nation in recent months in number of animals marketed.

Particular attention is being focused right now in the major Omaha packing houses on the ductless glands which are the source of ACTH, Cortisone, and the many other hormones which are employed by the medical profession in its new "miracles" of restoring health.

ACTH, for example, which has proved nothing short of miraculous in saving the lives of fighting men and others who have been badly burned, is being prepared by a new process involving low temperature refrigeration and high vacuum.

Highly skilled workers now are employed in every Omaha packing house to find and remove the important ductless glands from the carcasses of slaughtered animals. Many of the glands are so tiny and situated in such well-protected portions of the animal's body that only a skilled workman can find and remove them. After the gland is removed it must be trimmed of all surplus fat and tissue, while at the same time the workman must be painstaking in seeing to it that none of the precious gland is wasted.

Proper refrigeration is one of the most important elements in the recovery of ACTH and the many other hormones, as well as in the longer-established routine of recovering insulin from the pancreatic glands of animals. Ingenious refrigeration systems have been set up in the laboratories of the packing houses to provide for perfect preservation of the glands and their products because, in every case, the speed with which the glands are prepared and frozen determines their value for pharmaceutical purposes. Some of the glands, for example, lose their medicinal value in one hour if not properly preserved through refrigeration.

Among the glands being salvaged through refrigeration are the pituitary glands which yield a substance that promotes growth in the human body; anterior lobe of the pituitary gland which gives a substance that greatly lessens the labor of childbirth; suprarenal gland that yields adrenaline, epinephrine, and other substances of prime importance in treating heart conditions.

Adrenocorticotropic hormone, better known as ACTH, is hailed as one of the most important drugs ever to come out of the laboratories of the packing plants. It comes from the anterior lobe of the pituitary gland which is one of the most important glands, while at the same time it is

one of the hardest to recover because it is very small and is located in a bony sack at the base of the skull, one of the best protected spots in the entire body.

Discovery of ACTH was announced in June, 1950, by Armour & Co. scientists. At that time it was furnished to some 100 hospitals but now it has been made available to all hospitals, and all major meat packers are contributing to the supply. A short time after ACTH was announced, means were found of producing it at strength 180 times greater than the original standard.

Still another miracle drug being recovered in Omaha packing houses with the aid of an intricate refrigeration system is trypsin, an enzyme obtained from the upper intestines of all mammals. Its work is to digest proteins and it has been found to be especially valuable in treating wounds of war where torn tissues were likely to die and fatal gangrene set in.

Always before the dead tissue has had to be removed surgically, but with trypsin the dead tissue is dissolved without harming the living tissue.

The same drug now is being tried by the medical staff at Ohio State university to treat people suffering from tuberculosis empyema. Formerly 50% of such patients died because the disease crowds the space around the lungs with pus and bacteria, but experiments in Ohio already have saved many lives with trypsin.

Not only does the providing of glands for pharmaceutical purposes require Omaha packers to maintain a foolproof refrigeration system for quick chilling and constant temperature storage, but it poses a slow and painstaking task as well.

Wolverine To Market Welded Steel Tubing Late In Year

BOSTON — The Wolverine Tube Div. of the Calumet & Hecla Consolidated Copper Co. is expected to be marketing welded steel and brazed steel tubing by the third quarter of this year, Endicott R. Lovell, president of the company, reported in a year-end statement.

"In the meantime, our production of aluminum tubing is being expanded," Lovell declared. Metal allocations now are insufficient to satisfy the demands of our regular customers, he added.

With respect to copper mining activities, Lovell pointed out, "the need for an increase in the price of copper remains imperative. Although some relief has been extended in cases where particular operations were suffering excessive losses, by no means are mining activities providing a fair rate of return for the capital, energy, and time being invested."

Servel Begins Production Of Jet Fighter Wings

EVANSVILLE, Ind.—The first set of F-84 Thunderjet fighter plane wings rolled out of a huge new multi-million-dollar wing plant at Servel recently, nine months after ground was broken and nearly two months ahead of the expected completion date.

W. Paul Jones, president of Servel, speaking at ceremonies attended by top Air Force officials, state, and city dignitaries, and 5,000 company employees, said the first production from the 120,560-sq. ft. plant had not been expected until a later date. Other floor space has been converted to wings production and company officials estimate a total of 350,000 sq. ft. is now being used.

When production is accelerated the plant will employ 2,500. The more than 1,000 men and women currently working on production signed a huge scroll, attached to these wings, advising the armed forces in Korea that this was their Christmas present to them.

At the conclusion of the brief plant ceremony the wings were paraded to downtown Evansville, and the city turned the occasion into a community-wide celebration.

The wings are being made for Republic Aviation Corp. at Farmingdale, Long Island and will be shipped on special 60-ft. carrier trucks, each carrying 16 nested panels. Special permission had to be obtained from various state highway commissions for the passage of these oversize trucks and a special route laid out for the 1,000-mile trip.

Reliance Electric Moves Into New Plant, Will Centralize Technical Facilities

CLEVELAND—The new \$1,800,000 Euclid (Ohio) plant of Reliance Electric & Engineering Co. has been put into operation as 425 employees of the company's engineering, development, research, renewal parts, and tool departments finally wound up the two-week job of moving into the new facility from the firm's two plants on E. 152nd St., Cleveland.

To celebrate the occasion, a brief plant-opening ceremony was held recently.

The new plant is located at 24701 Euclid Ave. on a 65-acre plot paralleling the Nickel Plate Railroad right-of-way for 2,000 ft. immediately east of the Tapco plant near Babbitt Rd.

Built in nine months at a cost of approximately \$1,800,000 which includes certain production equipment and related service facilities, the plant is a single-story structure 442 ft. long and 352 ft. wide with a total floor area of 133,000 sq. ft. Off-street parking space, capable of accommodating 350 cars at one time, is located immediately adjacent to the plant.

The new plant is similar in basic architectural and construction essentials to a plant of approximately the same size built by the company in Ashtabula in 1947 for the manufacture of electric motors. Like the latter, the plant was designed for the manufacture of industrial-type electric motors and accessories.

A combination system utilizing automatic and forced-air, distributed

by area unit heaters, is used for heating and ventilating the factory.

The new plant enables Reliance to conveniently centralize a number of its technical functions under one roof at a single location. These include engineering, research, and development laboratories; the manufacture of electronic equipment and motor drive controls; renewal parts and customer service activities; and the design, development, and manufacture of specialized tools required by the company's other plants.

In addition, this new facility will make it possible for Reliance to meet mounting defense demands by stepping up by 100% the production of electronic controls, adjustable-speed V*8 drives, and related electric motor drives heretofore made in the company's two E. 152nd St. plants.

Besides the new Euclid facility, Reliance presently operates two Cleveland plants on Ivanhoe Rd. These and the Ashtabula plant will be retained. Transfer of renewal parts manufacture to the Euclid plant will result in expanded motor production capacity at the three other plants.

USE THE COUPON!

For "easy-to-get" product information . . . use coupon in the "Information Center" form.

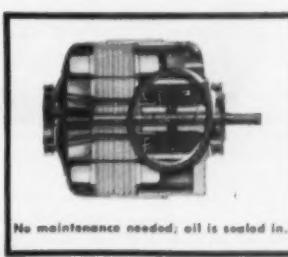
**OPERATES FANS AT ANY ANGLE**

Whatever your fan mounting position—up, down or at an angle—you can count on dependable operation from this motor. And no oil need ever be added! Because the oil is sealed in. The unit-bearing, force-fed lubrication system continuously circulates the oil between shaft and bearing... regardless of motor position.

Where noise level must be low, resilient mounting is available for

quiet operation. With suitable control, motor can be operated at two or three speeds.

A wide choice of ratings is available for many fan sizes. Call your nearest G-E Apparatus Sales Office soon. For further information, write for bulletin GEA-5338, Sect. 700-117.



No maintenance needed; oil is sealed in.

PARAGON
DEFROSTING
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300-M SERIES
From \$19.50 List

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THE FINEST TIME SWITCH YOU CAN USE

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GENERAL  **ELECTRIC**

700-117



"MEAT MARKET OF TOMORROW" is what Jack Cinnamon calls his new store where he will merchandise only meats, frozen foods, and dairy products from more than 400 ft. of open cases, probably the largest such installation in the country.



MASS DISPLAY and departmentalizing of meats is readily achieved for effective merchandising as indicated by this close-up of one section of the meat department.

Open Refrigerated Cases Only!

No Dry Produce, No Bakery, Groceries, Canned Goods; 'Super' Handles Meats, Frozen, Foods, Dairy Products

LINCOLN PARK, Mich.—What is believed by the installing contractor to be the largest installation of open refrigerated cases in the world—a total of 400 linear ft.—fills up a new food store in this Detroit suburb that measures a mere 40 by 80 ft.

That much equipment in such a relatively small space (as compared to the modern supermarket) would leave little or no room for anything else, one would assume. That's absolutely correct, because there's nothing else in the store. No gondolas, no dry produce racks, nothing except open refrigerated cases and two checkouts.

It's not a "super," readily admits Jack Cinnamon, the owner. There are no dry groceries or canned goods, no produce, no bakery, not even a liquor department, lunch counter, or beauty shop such as can be found in Cinnamon's 4-year-old supermarket just three miles down the road.

UP-TO-DATE BUTCHER SHOP

Actually, it's the old time butcher shop brought up to date, perhaps even a few years ahead of its time. It handles frozen foods, pre-packaged fresh, cured, and smoked meats, dairy products, including ice cream, and for the convenience of shoppers, bread. That's all. It does have a brilliantly lighted store front, though, that could hold its own on Times Square.

"We have streamlined production and eliminated waste to bring the cost of operations down," explains Cinnamon. "In this manner we are able to pass the savings to the consumer. We're knocking down the prices, but definitely not the quality of the products."

Purchases in huge quantities for the new and the older market combined with the complete self-service operation in the new venture are expected to give Cinnamon something of a price advantage. He'll need this because just a few doors away on each side of his new store are two

highly competitive supermarkets, one of which opened only the day before Cinnamon's store.

The new store is completely equipped with C. V. Hill fixtures, including a 6 by 8-ft. prefabricated walk-in cooler in the back room. The job was sold by Jack Pearlman, head of Western Refrigeration & Equipment Co., Hill distributor, who, incidentally, supplied the equipment for the much-talked-about "super" Cinnamon opened four years ago. Actual job of installing the equipment was subcontracted to Michael Wansac.

140 FT. OF FROZEN FOODS

Extending down the left wall and across the back of the new store is a continuous 140-ft. row of open self-contained frozen food cases. This row comprises 20 sections altogether. The first three sections are Hill 82XIC cases specially designed for ice cream. They have 1½-hp. units. The other 17 sections are 82XF cases which are powered with 1-hp. machines. All the cases are equipped for automatic defrost.

Above these cases on the wall is a brilliantly lighted sign with white translucent plastic background and bold block red letters proclaiming "Michigan's Largest Assortment of Frozen Foods!" That's probably a completely accurate statement, too.

Beneath a similar sign on the right-hand wall claiming "Michigan's Largest Selection of Cheeses" is a 68-ft. row of triple-deck Hill 33-S open dairy cases, 11 sections in all. These are filled with all varieties of dairy products.

Pre-packaged fresh and delicatessen meats are merchandised from 158 ft. of Hill 41F double-duty open cases. These 16 sections are lined up in four rows down the center of the store, the cases being placed back to back to form two long island displays.

Over each of the two islands, Western Refrigeration adapted the

same type of electrically lighted signs used on the walls to form a canopy and increase the effectiveness of the mass display.

Packaging of the meats, by the way, is done in the large packaging room at the Cinnamon supermarket three miles away. It is then hauled by refrigerated truck (built by J. R. Miller Corp.) to the new store.

Directly in front of the two meat "islands" displays are four Hill 40-U "dump" display tables featuring specials on ham and the like. These open cases measure 56 by 30 in. and are equipped with self-contained ½-hp. units.

At the far end of each of the two meat "islands" is a small frozen food "spot special" unit mounted on casters to feature specials in the frozen food line. These, of course, can be moved around the store readily to other locations.

And up front at the two checkouts

are two more refrigerated cases. Hill 17-S self-contained open frozen food fixtures for the spot display of featured impulse items.

All the frozen food cases are self-contained, but the dairy and meat cases are remote. In the back room, which is only 10 ft. deep, these remote units are mounted on a balcony above the walk-in cooler and the washroom.

Two 5-hp. refrigerating machines serve the open dairy cases; a single 5-hp. unit handles the cold red meat cases; three three's handle the lunch and fresh meats. Another unit is hooked up to the walk-in cooler.

These units are all water-cooled, and a centrifugal water pump was installed to insure adequate circulation to the condensing units.

Also in the back room will be located the 15-ton unit serving the air conditioning system which was installed by Sogaard & Debo.

Refrigerated Case Sells 2-to-1 over Conventional Type, Market Owner Finds

OAK CLIFF, Texas—Maintaining all perishable produce under refrigeration in a custom-built, 25-ft. self-service case has made it possible to sell "two to one" over dry-rack, water-mist, or ice-refrigerated types at Wyatt's Oak Cliff Market here, according to Harold Hood, manager.

The case, which contains six compartments for reserve stock, is given "deep" refrigeration by elevating the refrigeration coils an extra 4 in. behind the produce on display. This raises the "blanket of cold air" several inches and makes it possible to stack perishables substantially higher. Also, the sensation of cold is more readily apparent to shoppers.

Powered by a 2-hp. compressor unit, the case has not only doubled sales of perishable produce, but has cut spoilage to a negligible factor, Hood indicated.

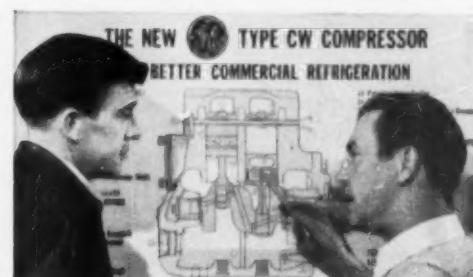
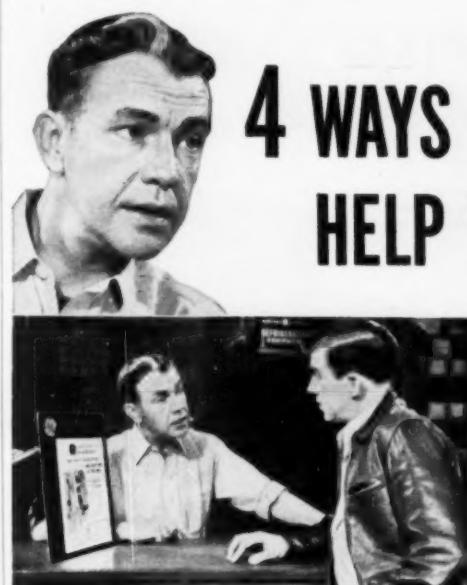
Ferguson, Lindstrom Take Branch Posts with General Controls

LOS ANGELES John R. Ferguson has been appointed district manager of the General Controls Co. branch office at Denver, Colo., and Herb Lindstrom, former Denver branch manager, has assumed a similar position at the Minneapolis branch, it was announced by J. F. Ray, vice president in charge of sales.

Ferguson formerly managed the Salt Lake City branch office.

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General Electric Company
Air Conditioning Division, Sec. AC-15
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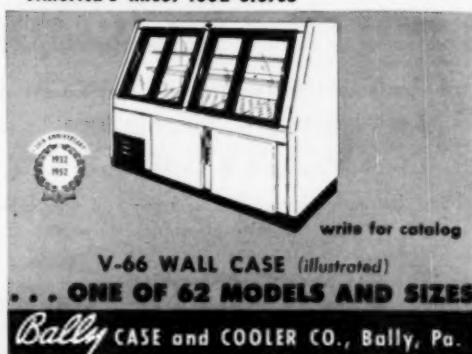
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Bally CASE and COOLER CO., Bally, Pa.

20 Questions Help Businessmen Appraise Their Performance In Light of Their Objectives

CHICAGO—"Now is a good time to set your own personal objectives, to appraise your own strengths and weaknesses, and to start on a program of action," H. Ferris White, Jr., of the business management firm of Root, Allen & Hamilton, told commercial refrigeration distributors attending the fifth annual convention of the National Commercial Refrigerator Sales Association here recently.

White asserted that top management of large concerns are beginning to accept appraisals of their organization's performance in the light of their objectives as a standard practice to be done at regular intervals.

This appraisal consists of discussing short range goals of the firm, its current performance, and the steps it must take to move toward its objectives.

"This is not an appraisal of past performance, but a study of current strengths as they may be applied to challenges of the future," White declared.

By taking time out for self-appraisal, smaller firms "can do a great deal to keep ahead of shifting economic conditions," White suggested.

"I cannot set any over-all objectives for you as individual operators," he said, "but I am going to suggest 20 questions that can be used in reviewing your business and organization.

These questions, if honestly answered by you, should highlight weak points calling for attention. The first 10 questions have to do primarily with the sales area of your business, while the last 10 cover customer service and management control.

Here are White's 20 questions and his ideas on their application to the commercial refrigeration sales business:

1. Do you have a balanced line, or are you spreading sales effort over too many equipment and accessory items?

Whether or not to handle an extensive line or limit sales to a small group of items should be determined by what it takes to hold your customers. This, of course, is part of the service aspect of any distributing business.

You should not plan to be so fully stocked that you can meet any demand across the counter. Tying up a large amount of your capital in a complete line of equipment, most of which moves slowly, results in a small percentage return on your investment.

It also results in over-all sales effort being dissipated. Sales effectiveness on the slower-moving products is lessened because salesmen know less about them. In this regard, there is seldom a compelling reason for carrying directly competing products.

If your policy is to distribute a broad line, you should reach for a well-chosen, balanced group of quality products, but you still have the job of going out and selling this line. You should also endeavor to take full advantage of the manufacturers' immediate shipment and local warehousing facilities.

2. Does each item in your line stand on its own feet profitwise?

The gross margin on each of your products should be sufficient to warrant handling it. An average gross margin ample enough for a fair profit after operating expenses is a basic requirement, but each product should contribute independently to it.

Those items in your line showing strong profit margins with a minimum of selling effort should receive the greatest sales emphasis. On the other hand, items which are extremely hard to sell may appear to carry adequate gross margins, but the high selling expense attached washes out any final net profit.

3. Is your sales territory large enough to support good salesmen—small enough to permit good coverage?

Your sales results in the field can be impaired by poorly designed territories. More customers can be serviced properly or too large or inaccessible a geographic area to be covered by one salesman means cus-

tomer neglect and offers an open road to competition.

Under such conditions sales effort is largely applied to immediate prospects and to the more lucrative accounts. Little time is available for long-range customer development and frequent customer contact.

On the other hand, a territory in which sales potential is small may be expensive to maintain. A too-small territory deadens sales initiative by offering too scanty a financial reward to attract and hold any top-flight salesmen.

4. Is your sales force strong enough for competitive selling?

With reasonable earnings opportunities still present in the commercial refrigerator field, it should be possible to sign up and hold one or more good men. Top performance can be demanded as long as this earning potential continues.

You can and should gauge the power of your own sales force by a close appraisal of each man on the points of sales performance under competitive pressure, his drive and industry, his knowledge of your products, his customers and their businesses, and his character, personality, and intelligence.

In today's market, unless we have full mobilization, no company need try to get along with an undermanned sales force, poor sales performance, or compromise with high standards of salesmen selection.

5. Are your salesmen developing their territories or only chasing hot leads?

If your sales effort is pointed towards "high-spotting" territories, you are not getting the kind of solid sales performance that pays in the long run.

When a substantial new prospect opens up in your area, he should be closely followed to offset competition, but this effort must be supported by planned continuing coverage of the entire territory.

Territorial development work must be aimed at uncovering all possible and potential customers and selling them on your company, your products, and services.

It means working hard at holding your regular customers and getting old customers back. Guided by management, this approach should build solid customer acceptance and provide assurance of repeat business.

6. Are you getting a fair share of the business in your trading area?

To satisfy yourself on whether you are getting your proper share of sales in your local area, you must know the area potential—by customer and potential customer classification. With these facts you should then be in a position to evaluate your own performance.

Your sales volume trend and the sales trends of your competitors are more important than a snap-shot of today's performance. Competitive strength should be measured in terms of lines carried, price policy, size and caliber of sales force, company reputation, and service ability.

An accurate picture of your own potential is also necessary to enable you to do a good job of determining objectives, policies, budgets, and other factors in the general management field.

7. Are you sacrificing all profit on special deals to get new sales?

The price cutting and super trade-in problem brings in special deals that may get you in the door, but they also reduce profits materially. Customers sold through such means are usually open to competition coming in on the same basis and all of you suffer.

Customers signed up originally through strong personal selling of quality and service at fair prices must provide the basic volume your business needs, and this is the type of relationship that is hardest for competition to break up.

The super-trade-in can be just as harmful as price cutting and has the same basic weaknesses. Your cus-

tomer gets the idea that his suppliers will do anything for a sale, and it's almost impossible to get him back on a reasonable basis.

8. Are your salesmen getting any direction and guidance from management, or are they on their own?

A major hurdle to overcome is the easy-going attitude of some salesmen which grew up during the last few years. Management must attempt to build the right attitude in their men to meet competitive pressure effectively.

Obviously, a manager must have competitive drive himself before he can pass it on to his men or do a top job with his customers. Frequent contact between management and the sales force to keep the whole team pushing the higher profit volume lines is helpful. But these contacts must have direction and purpose beyond assistance in making individual sales and passing on special deals.

Important management help in the form of sales forecasts, territorial quotas, and route planning and scheduling are required. Top management should also add to the knowledge of field men on equipment applications. Strong competitive sales techniques should be discussed by management at well-planned meetings which serve to knit your group together.

9. Do you have a merchandising program effective in promoting your company, its products, and services?

Effective, well-directed merchandising accounts for much of the difference between success and failure in your field. It is not enough today for the distributor to "ride the coat tails" of his suppliers in advertising the products which he carries.

The buyers of your products will buy merchandising aids for their own operation, and they must be sold on your company as a basic supplier of store equipment, as well as on the reputation of the products in your line.

Your merchandising efforts should be aimed directly at the store operator. It is up to you and your salesmen to make sure that your local market is aware of product changes, product improvements, and new items added to the line.

It is not enough to rely on the various advertising mediums used by your suppliers. Your merchandising effort in the final analysis depends on personal contact.

10. Are you equipped to take advantage of changing local business conditions?

Sharp shifts in local, regional, and national business activity should be carefully watched in laying future sales plans. Since your business is largely reliant on the current prosperity in your area, it is helpful to have a good feel of what is ahead so that you may shift your sales emphasis as desired.

Changing trends in grocery store merchandising in the area you are

(Concluded on next page)

demand
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683 also available in cast brass body with $\frac{1}{2}$ " female N.P.T. inlet and outlet connections. (No. 685 Strainer available as an accessory).

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Guide for Self-Appraisal--

(Concluded from preceding page) serving should be carefully watched, and the future plans of these stores should be determined insofar as possible.

Moving ahead toward predetermined volume objectives, based on an estimate of what is to come, makes your merchandising effort pay off far better than when you scatter your shot over the market hoping to hit a soft spot somewhere.

"In these first 10 questions I have concentrated on those points that have to do primarily with customer contact," White said.

"Appraising your own organization on each of these points and then doing something about it is bound to be helpful. Such a self-appraisal should take place regularly."

"It can be constructive only if done sincerely and with enough care so that you will end up with a list of strong points and weak points, giving you a full understanding of the base on which you can continue to build."

"In the next 10 questions I cover customer service and management controls, without which any amount of sales effort will bring small rewards."

"Sales of commercial refrigerator equipment are subject to all the basic risks of business. There is a natural tendency for individuals to curtail or postpone substantial purchases in times of uncertainty."

"Doing a good job saleswise and servicewise is the best way to minimize risks. In a tighter market a good sales job may have to be evaluated by a considerably shorter measuring stick."

"If this is the case—if your sales are likely to be curtailed or a stringent buying policy adopted by your customers, all elements of your business should be in such shape that they can be quickly trimmed down to fit."

"Any serious lag may prove to be disastrous. To prevent costly delays, you should know all the facts of your operations on time and be ready to act on the indicated trends."

11. Are you providing good shop service and making money at it?

Some of you have an active service department which plays a real part in building sales. Such an activity can be a very expensive load on a distributing organization.

If carefully controlled, however, this activity can become a real asset to the over-all operation. It requires a careful schedule of the serviceman's time in order to meet service commitments and to keep each man in the department fully occupied.

If this service work is distributed with good judgment, this area of the business can provide a profitable operation. Operating figures for your service department should be kept separately so that performance can be judged accurately.

12. Are you providing full initial service and avoiding emergency calls?

As I understand it, the average sale of a commercial refrigeration unit carries a one-year free service agreement. The average customer buying your units, automobiles, windmills, or a thousand and one other products is going to ask for as much free or costly emergency service as he can get away with.

Every sound distributor has to

stand back of the product he sells, but when he is asked to drive across town on a winter's night because of customer ignorance or customer carelessness, the distributor should temper his desire to be of service with a strong dose of common sense.

This initial service period and any emergency calls can frequently be turned into worth-while selling time. Your men should keep this in mind and make every such call pay off either in building goodwill or building sales.

13. Are you realizing the full profit potential on used equipment sales?

Sound inventory control is the prime requirement of a profitable used equipment business. Of course your inventory objective should be to keep turnover high and inventory at the lowest point consistent with your sales requirements.

Naturally, in lush times you face an ever-increasing inventory of used units, but according to past history of the commercial refrigeration business, the cycle changes every few years, and there is a heavy demand for used inventory.

In your forward planning you should try to forecast these cycles so that you will be well prepared with salable inventory when the occasion demands.

It looks quite possible that the next two years may place a considerable load on used equipment as original manufacturers are cut back because of rising defense production activity.

14. Is your investment in product kept at a minimum but large enough for good customer service?

New product purchasing should balance stock requirements against working capital needs. Availability of equipment items, time in transit from manufacturer, and opportunities for direct shipments and consignment stocks should all be explored in doing a buying job. Particular care should be taken in stocking secondary and slow-moving lines.

15. Can you do business efficiently with your present facilities?

Many distributors seem to feel that any investment in sales room and office facilities should be kept at an absolute minimum. This is a reasonable attitude if not carried too far.

The general behavior of a salesman frequently reflects the condition of his home office. Facilities should serve as evidence of efficient management. They should be large enough to permit orderly stocking of inventory and allow for workable office space.

Commercial refrigeration distribution calls for facilities strategically located. Balancing required investment against this factor should result in a set of facilities with which you should be able to maintain and improve your competitive position.

The additional investment required to make your outlet big enough, attractive, well laid out, and well equipped should be favorably considered.

Additional space and equipment for offices, equipment display, and an orderly service department should pay for themselves through employee morale and higher sales appeal.

16. Is your credit policy driving away sales—or building bad debts?

Assurance of minimum credit losses under pressure for maintaining and increasing sales volume calls for a realistic approach to your credit policy. A sound foundation for granting credit is a careful investigation of each customer and potential customer through banks and other business contacts and personal reputation.

A "personalized" rating measured on a sound credit scale ranging from full credit down to a straight c.o.d. should then be established and periodically checked and altered as required. Errors in judgment should be rectified in the course of a closely watched collection procedure.

With credit policy specifically and firmly established, you are in a position to reach for business on the right basis with confidence.

17. Do your operating figures tell you what you need to know to run your business?

Basic records that show where your business is today and where it has been and controls which provide guidance over where it is going are essential for stabilized operation.

The growth of many commercial refrigeration distributors has added business complexities which cannot be handled on a hit-or-miss basis.

You should be able to accurately judge monthly how you are making out profitwise by product. This calls for well-designed financial and operating statements incorporating the results of accurate inventory control.

Timely issuance of these statements with the current detailed figures on sales, expenses, and financial position laid against past results, should offer the means for gauging performance and controlling operating costs.

18. Do net profit or income results justify your over-all business investment?

Setting an earnings goal either in terms of income to the owner or net profits should provide a short-range objective towards which all controls can point. As your investment in facilities, inventories, and working capital increase or decrease, your target should be adjusted in order to justify your fluctuating capital investment.

Having set an earnings goal, the required sales volume should be determined and will serve as a basis for the sales program and for controlling fixed and variable costs.

19. Do you have time to plan ahead?

Planning is the management tool which can translate the indicated trends and needs of the business into a well-balanced program of action for selling and promotion.

It is common with other sales executives, commercial refrigeration distributors have the problem of balancing planning time against selling time. Under the pressure of day-to-day selling responsibility or in the face of a sales crisis, the tendency is to regard the planning phase of sales management as postponable.

To do a good job of planning requires regular allocation of the time necessary for it. This means a deliberate separation of important from unimportant matters and delegation of the latter.

20. Have you provided for perpetuation of your business organization?

Characteristic of the commercial refrigeration distribution field is the relative youth of the majority of companies. Most of them are still managed by their founders, but some

of these owner-managers are now reaching the point of retirement.

To insure continuation of the business and protection of your investment, adequate advance provisions should be made by you for passing it on to other capable hands and for coping with the inheritance tax problem. In many instances, this calls for planning moves which may result in ownership changes during the lifetime of the founder.

Building a future organization should be part of your long-range program. Start delegating management responsibility and authority to others while you are still around to counsel and advise. If you have no replacements available for you as top man, it is a reflection on your executive ability, not on the men working for you.

"Four main points can be used as a guide for self-appraisal," White said:

"1. Set your own personal business objectives.

"2. Decide where you are now and what has to be done saleswise to achieve these objectives.

"3. Organize your own time and your men's time to meet this sales requirement.

"4. Set up a series of steps moving from your present position towards your own objectives.

"During the next few weeks I recommend that you spend some of your leisure time in a real self-analysis of your business. Keep these questions in mind and try to add some of your own.

"Be as objective as possible and take time to insure a pattern of answers that will be of real benefit to you in building a program for the future."



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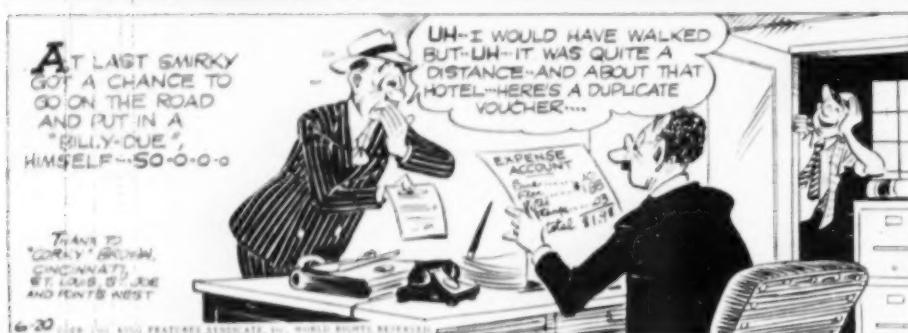
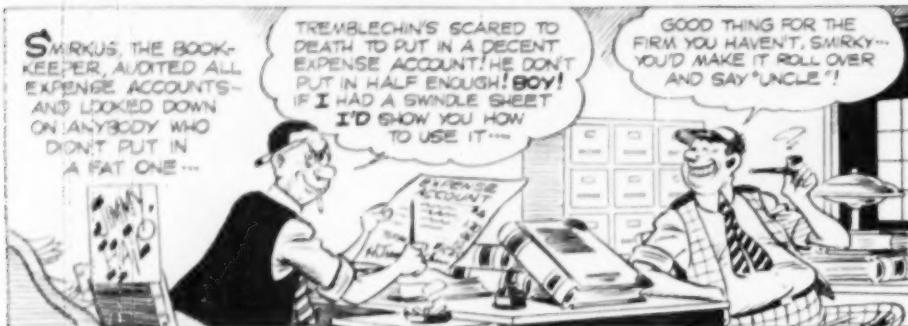
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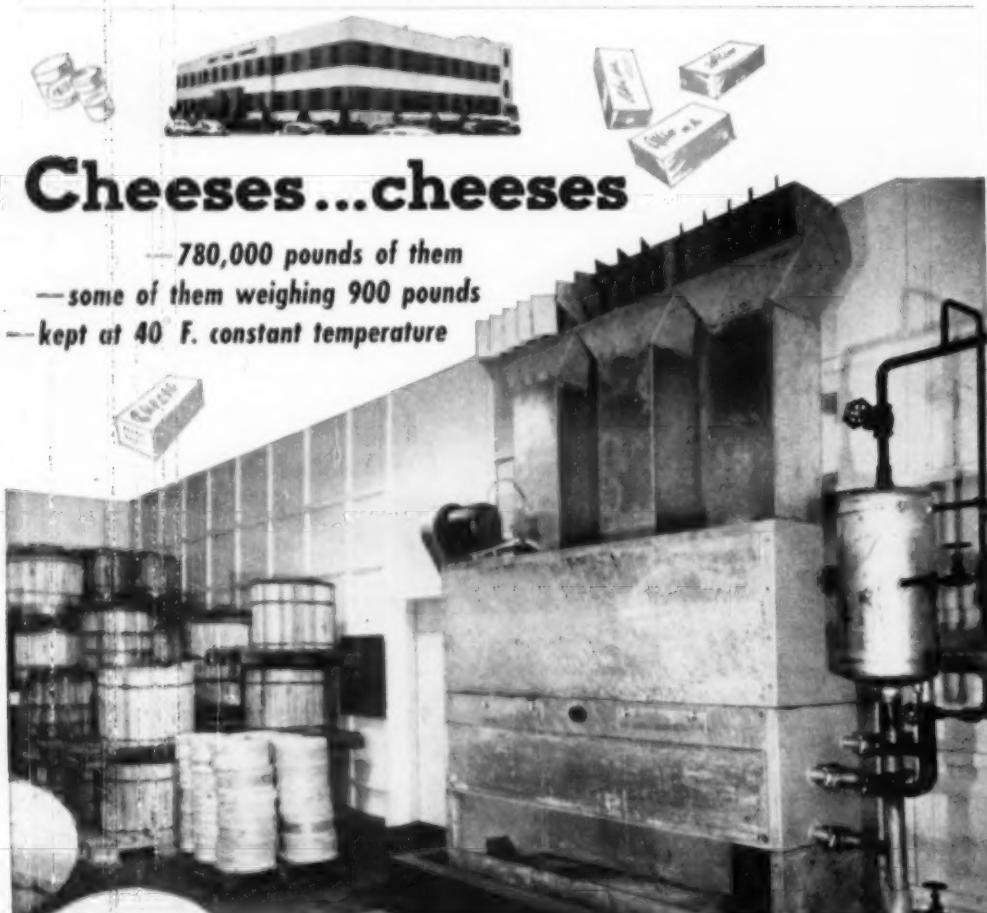
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Box 3899, Air Conditioning & Refrigeration News

They'll Do It Every Time . . . By Jimmy Hatlo



Do You Have 'Both Feet On The Ground'?



At the San Francisco Plant of Kraft Foods Company, a single ACME Bio-Cold unit keeps the entire stocks at constant 40° F. More than three-quarters of a million pounds of Cheeses are stored in a room 40 x 60 feet. Some of the "big cheeses" weigh as much as 900 pounds. The single ACME Bio-Cold unit maintains a constant 40° temperature, easily and without any mechanical difficulty.

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care." —Charles A. Dana.

At Last! Frozen Foods Undersell Fresh Produce!

Here's the news producers of home and farm freezers have been waiting for:

Frozen foods are cutting more and more into the sale of fresh produce, according to Hugh J. Davern, vice president in charge of merchandising of the Grand Union Co. That's what he told members of the Vegetable Growers Association of America at their annual convention not long ago.

Mr. Davern pointed out that retail prices of frozen foods gradually are being lowered to a point where there is little difference between frozen and fresh foodstuffs.

The stability of frozen foods prices (as against fluctuation quotations on fresh produce) often makes frozen foods more attractive to consumers from a budget standpoint than fresh stuff.

"Sharp price fluctuations of fresh vegetables, particularly those in off-seasons, are not good for truck farmers who don't freeze their produce," Mr. Davern warned.

"During Thanksgiving Week in 1951 frozen green beans sold at the rate of 37 cents a pound while fresh green beans retailed from 39 to 43 cents a pound," he pinpointed. "Frozen peas brought 29 cents a pound, against 33 cents for fresh peas."

For quite awhile it has been apparent that frozen vegetables are easier for the housewife to cook, and that frozen foods have little if any waste.

While some price gyrations in unfrozen produce are unavoidable—because of changing weather and growing conditions—other fluxions are caused by speculation, artificially created shortages, and consumer preferences.

The quality of any food is judged when it is prepared and eaten in the home of the customer. Housewives aren't interested in the comparative primeness of vegetables or fruits at the time growers ship them from the fields, nor when they are delivered from warehouses. All they know about is what they put on the dinner table.

One sure way to dissatisfy a housewife is to supply her with off-grade and second-grade meat and vegetables. Therefore, it is just as important that food producers control quality at the shipping point as it is that retailers present it at the selling point.

And that can be done best when foodstuffs are fresh-frozen.

Slowly but surely the Frozen Foods Era is arriving. And in many parts of the country, the market for home, farm, and store freezers barely has been tapped.

Notable Quotes

"It is a shocking failure of our business structure that many corporations spend millions in the development and merchandising of products but fail to provide dealers with tools and ideas for systematically winning customer support. Actually, the man at the retail level is the manufacturer's representative in the minds of the public." —MORRIS B. ROTMAN.



SHOPPERS in Stop and Shop Market No. 3 in Indianapolis serve themselves from the 80 ft. of frozen food cases installed by F. D. Gardner. All told, Gardner put 283 ft. of refrigerated fixtures in the big air conditioned market.

Re-Proving a Trade Axiom

Repeat Orders Booked by Distributor Demonstrate That Satisfied Customers Mean More Business

By John O. Sweet and George M. Hanning

INDIANAPOLIS — That satisfied customers mean repeat business is perhaps a tired, old saying, but F. D. Gardner, veteran Indianapolis commercial refrigeration distributor, can cite some recent instances that bear out the truth of it.

Gardner, who specializes in selling and installing Hussmann food store fixtures, has a prime example in customer Don Harris of Clinton, Ind. About four years ago, Harris started a small grocery store in Clinton, a town of 6,500 population located in the heart of Indiana's coal mine district.

When first opened, Harris' store measured only 22 ft. by 90 ft. He later took over the room next to the store, making the dimensions 44 ft. by 90 ft. Early this year, he added a third room which gave him a 66-ft. frontage.

The store is now doing a weekly volume of between \$25,000 and \$30,000. Its present meat department volume is running between \$7,000 and \$7,500 a week, compared with

\$900 during opening week.

In September, 1950, Harris changed his meat department to 100% self-service with the installation by Gardner of four Hussmann model OS11 open-type cases and one model OSS case—a total of 49 ft. of fixtures. Meat sales immediately shot up 33½%. Volume on chickens increased from about 200 a week to between 800 and 900.

The store also installed a model OLT10 frozen food case. This move boosted sales of frozen fish from about 200 lbs. a week to 1,500 lbs.

"The point of all this," Gardner remarked, "is that we have just received an order for \$9,000 worth of additional equipment from Harris." He added: "His is the fastest-growing market we've ever done business with."

When it comes to pure volume of equipment installed, Gardner's best effort to date has been Stop and Shop Market No. 3 here, which opened early last year. This is not only the largest job Gardner ever

handled, but the store is currently the largest in the state, according to the distributor.

Located on Indianapolis' south side, the supermarket absorbed 283 ft. of refrigerated fixtures. This total includes 77 ft. of meat display cases (7 11-ft. OS11 cases), 50 ft. of dairy display cases (7 8-ft. models 2D8 cases), 80 ft. of frozen food cases (8 10-ft. OLT10 cases), and 70 ft. of vegetable display cases (7 10-ft. model WS10 cases).

In addition, the store is completely air conditioned by a Chrysler Airtemp central system, and has four walk-in coolers built in by Mundet Cork Corp. Gardner installed the coils and condensing units for the coolers, which include two 10-ft. by 12-ft. vegetable and dairy boxes, a 10-ft. by 30-ft. meat cooler, and an 8-ft. by 10-ft. freezer box.

EQUIPMENT INSTALLED

As there was no place in the store for the condensing units, an 8-ft. by 60-ft. room was constructed outside to house the 15 Hussmann units used to operate the equipment. Model numbers and sizes of the condensing units and the cases they serve are as follows:

Two W500FS 5-hp. units on the meat cases; two W300FS 3-hp. units and one W100FS 1-hp. unit on the dairy cases; four W300FS 3-hp. units on the frozen food cases; a W500FS 5-hp. unit on the produce cases; and a W33FS 1½-hp. unit on the bakery cases.

One of the walk-ins is served by a W500FS 5-hp. unit and two UC105 coils; another by a W300FS 3-hp. unit and an SU85 coil; the third by a W200FS 2-hp. unit and an SU85 coil; and the fourth by a W150FS

1½-hp. unit and a CJ105 coil.

As an outgrowth of that installation, Gardner recently equipped the sixth unit of the Stop and Shop chain. This market has the following equipment:

Four WS10 produce cases, a WDRB dry produce case, a W300FS 3-hp. condensing unit, five OSF11 open meat cases, a W500FS condensing unit, three 2D8 dairy cases, a W500FS unit, a DX6-6 self-contained bakery case, four OLT7FA frozen food cases and one OLT7CVI frozen food case, a W150FS unit and F1000ST coil in a 14-ft. by 10-ft. built-in meat cooler, a W100FS unit and CJ85 coil in a 6-ft. by 10-ft. built-in dairy cooler, and an 8-ft. by 10-ft. by 8-ft. sectional produce cooler with an F500ST coil and a W75FS unit.

Unlike many distributors, Gardner does not feel it is necessary to handle complete store installations himself. Instead, he works in conjunction with Stanley W. Flora, who sells the E. O. Bulman line of shelving in the area. Gardner takes care of refrigeration layouts and Flora the rest—an arrangement that has proved highly satisfactory over a number of years.

IF IT'S NEW, HE WANTS IT

One customer Gardner really enjoys doing business with is Joe Guidone, owner of the Arlington Market.

"Any time new equipment comes out," Gardner explained, "Guidone wants it. He'd like to change equipment in his store to have the latest models out at all times."

It was Guidone who, in 1947, installed the first self-serve meat department in the state, Gardner recalled.

The fact that Gardner installed

refrigeration equipment in a number of the 30 Food Liner stores in eastern Indiana again bears out the truth of the "satisfied customers mean repeat business" adage.

Gardner makes extensive use of installation photographs (taken by his daughter, Fern) in promoting his business. Huge blow-ups of the cases installed in the Stop and Shop Market No. 3 adorn the walls of the general office, while numerous framed pictures of other jobs create Gardner's "den" in the same building.

Photos of the Stop and Shop installation were also used in an attractive four-page mailing piece. This like the firm's other advertising pieces (house organs, used equipment lists, etc.) are mailed to about 3,000 retail grocers in all the counties in Indiana which Gardner covers for Hussmann. The mailing list is revised annually.

Gardner has been handling the Hussmann line for a long time—since 1929, in fact, and he's been in the refrigeration business even longer—since 1922. Two trophies in his den—won in Hussmann sales contests, attest to his ability as a salesman. Legends on the trophies certify that he made top sales among Hussmann distributors in 1935, 1938, and 1940. He captured one trophy by going 284% over quota.

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Ceiling Prices on Construction

Ely's Interpretation of CPR 93 Tells Refrigeration, Air Conditioning Contractors How To Comply with Price Law; Forms Are Due Jan. 20

LOS ANGELES An interpretation of Ceiling Price Regulation 93, which tells how to establish ceiling prices in the construction industry, was recently prepared for the Refrigeration and Air Conditioning Contractors Association of Southern California by Henry B. Ely, executive secretary of the association.

Here are excerpts of Ely's interpretation which should be helpful in gaining a clearer understanding of how the regulation works. It applies to all refrigeration, air conditioning, plumbing and heating contractors as well as general contractors and contractors engaged in other special trades.

Filing day for forms listing installed sales charges and hourly rates, time, and materials charges is Jan. 20. They are to be sent to your local OPS office.

CPR 93, fixing ceiling prices for the construction industry, requires the contractor to examine all prices charged during the pre-Korean period, July 1, 1949 to June 24, 1950, for various types of construction contracts, using the highest method of computing profit and then in the same manner to current costs, add customary profit, but with this difference. The profit item must be reduced by 10%.

"Since labor and materials have increased at least 10% over pre-Korean days, the present regulation assures a contractor of as much or more amount of profit than the contractor had prior to the Korean war, as much profit, if wages and materials have increased only 10%; more profit, if they have increased in excess of 10%."

The contractor is not limited to those increased costs which have heretofore taken place but may consider increases in costs as they occur, provided, as to wages they are not beyond those permitted by the Wage Stabilization Board, and as to materials, the purchases are not made on the 'black' or 'grey' markets.

CPR 93 was issued Nov. 14 to be effective Nov. 20. It is suggested that the contractor prepare prices under CPR 93 as soon as possible so that violations will be kept to a minimum.

Relationship with CPR 34

Where you have registered service charges under CPR 34 you may either concur to use those prices or reprice under CPR 93, either now or later on.

If you ceilings to use your CPR 34 prices, you must file a statement with the local OPS office setting forth the prices and stating that they were priced in accordance with CPR 34.

Only a sharp pencil can tell you whether to continue under CPR 34 or under CPR 93. Under CPR 34 costs of labor and materials were fixed as of Dec. 19, 1950 to Jan. 25, 1951, but the contractor was entitled to then roll markup.

Under CPR 93, the contractor is allowed all legitimate increases of labor and materials but is limited to the highest percentage markup for

the period between July 1, 1949 and June 24, 1950, less 10%, or if the contractor separates his overhead and profit, the full percentage of his overhead and his percentage of profit less 10% of the profit.

However, these differences between CPR 34 and CPR 93 do not apply to charges made on an hourly rate basis or on a time and materials basis.

With hourly rates and time and materials contracts, the hourly rates and the time portions are computed differently under CPR 93 than other types of contracts.

"For hourly rates and time and materials you get your highest dollar markup over and above wages and direct payroll charges during the period up to June 24, 1950. Then to obtain your current ceiling price add current wages and direct payroll costs. This should be compared with the rate you are permitted under CPR 34.

"Here is an example:

"Suppose your pre-Korean charge was \$4.00 an hour, wage rate \$2.00, payroll cost 20 cents, then your markup was \$1.80.

"Under CPR 34 your hourly charge was \$4.50 consisting of wage rate \$2.25, payroll costs 22 cents, and markup \$2.03. If your wage rate has not increased since you established the \$4.50 rate then you should retain your CPR 34 rate since under CPR 93 you would be allowed only the \$2.25 wage rate plus your payroll costs which we will say increased to 25 cents plus your pre-Korean markup of \$1.80 or \$4.30 per hour.

"If your wage rate has substantially increased since you figured the rate that you are permitted under CPR 34 then you should consider computing under CPR 93.

"Thus suppose your current wage rate is \$2.50 per hour. To this \$2.50 add, say, 25 cents payroll costs, plus the pre-Korean markup of \$1.80 and the total is \$4.55 rate per hour.

Coverage

"All construction work including new work, service, alteration, and repairs are covered by CPR 93 except

"1. Where the contractor has no employee.

"2. Installations by a manufacturer subject to CPR 30.

"3. Installed sales and repairs of appliances such as domestic refrigerators, space heaters, water coolers, and portable air conditioners.

"4. Construction work for a defense agency or to a person in connection with a defense contract.

"5. Service contracts for domestic heating units.

"It is not thought that exemptions from CPR 93 are thereby free of all price controls. It is probably that they remain under the General Ceiling Price Regulation, CPR 34, or some other appropriate regulation.

Relationship Between CPR 93 and CPR 67

CPR 67 fixes the resale price of certain types of compressors, indu-

trial fans and blowers, industrial electric heating units and devices, condensing units 25 hp. and over, and other machinery.

"It applies, in our opinion, to wholesalers and jobbers but does not apply to installations by contractors. Of course, whenever a contractor acts as a wholesaler or jobber and resells to another dealer or to a consumer without installation, CPR 67 would apply to such a transaction.

"However, whether or not CPR 67 at one time applied to installations by contractors, it no longer does, for CPR 67 definitely states: 'This regulation will not apply to sales for which ceiling prices are subsequently established by any other numbered regulation of the Office of Price Stabilization.' There is no question that CPR 93 covers installations by contractors and thus replaces CPR 67 to that extent.

Overhead and Profit

"Many a contractor in the construction industry has never made a distinction between overhead and profit. He is the contractor who figures his direct costs and then adds a percentage for 'profit' without considering that a part of this 'profit' goes into overhead.

"The difference between overhead and profit is of utmost importance. Basically, if a contractor during the period between July 1, 1949 through

June 24, 1950 used a percentage of markup for overhead and a percentage of markup for profit he may use the same percentage for overhead based upon current legitimate costs, while the markup for profit must be reduced 10%.

"If on the other hand the contractor during this period made no distinction between overhead and profit, then his entire markup for these items must be reduced 10%.

"The question then arises as to whether or not in fact a contractor made the distinction between overhead and profit during the period from July 1, 1949 through June 24, 1950.

"There is no problem when the records of the contractor during that period show a markup of so much for overhead and so much for profit. It is more difficult when no written records support the contractor's claim that a distinction was made.

"We know of a general contractor who always figured 5% for overhead and 10% for profit, but like as not his estimating sheets showed a straight 15%. In that case we would have no hesitation in recommending that he increase his overhead markup by the full percentage and only reduce his profit markup.

"Absent supporting records, each contractor must decide for himself in good faith whether or not he made a distinction between overhead and profit, whether such a distinction is consistent with his records, and whether he could, if necessary, stand up under cross examination on the question.

"Contractors should be reminded that the distinction between overhead and profit has no application to time and material, hourly rate, and cost plus a fixed dollar fee contracts.

Estimation of Installation Costs

"For lump sum contracts CPR 97 provides that in arriving at the ceiling price for a job, the contractor estimates the cost of installation.

"Many contractors fondly believe that for all practical purposes contracts with estimated costs of installation have no ceiling, for how can you prove that a contractor deliberately overestimated the cost of installation?

"I suppose the direct answer to this question is that sometimes you can prove it and sometimes you can't.

"Before illustrating some methods of proof, let us bear in mind the possible penalties if the contractor is caught either by a disgruntled customer, an OPS spot check, or upon review of income tax return by that Internal Revenue Agent:

"1. Disallowance of all job expenses as a cost under the Federal Income Tax Law.

"2. Federal injunction suit.

"3. \$10,000 fine and imprisonment up to a year.

"4. Suit by certain consumers for treble damages plus attorney's fees.

"5. Similar suit for treble damages by the Federal Government.

"Proof of deliberate overestimation of installation costs would be difficult with one-man businesses where the owner does all the estimating, writes the contract up, etc.

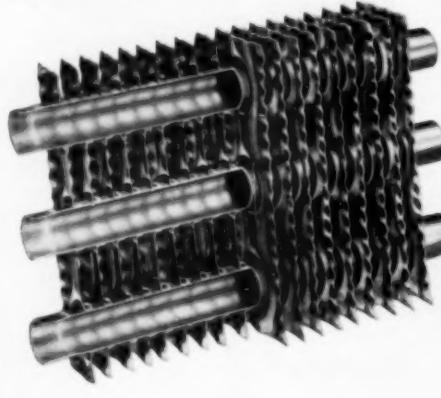
"However, everyone must retain all records in connection with estimating costs and the job so that if the individual owner consistently overestimated jobs, this would be evidence that the overestimations were not a mistake.

"Furthermore, it is possible that (Concluded on next page)

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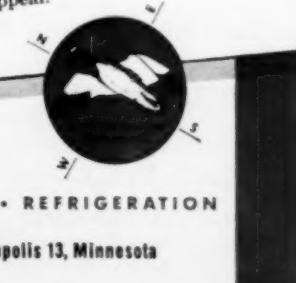
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How To Figure Contracts--

(Concluded from preceding page) even a genuine mistake in estimation may result in an over-ceiling price and subject the contractor to many of the penalties "in the law provided."

"In addition, large companies would face the difficulty of having to either instruct the estimator to overestimate, or have someone always mark up the estimate, both of which practices are highly dangerous."

The Various Types of Construction Contracts

"CPR 93 requires the contractor to use the same estimating procedures for the same type of work and type of contract as the contractor used during the base period from July 1, 1949 through June 24, 1950, with the exception that where profit as such is figured, it must be reduced by 10%."

"Where the contractor has not used a particular type of contract in the base period he may apply for permission for that type of contract to the local OPS office provided he knows how his competitor charges."

"For a particular job the contractor may have a choice of several methods of pricing provided he used different types of contracts for comparable work during the base period."

"Thus the contractor might choose a lump sum, a cost plus fixed percentage fee, or a cost plus fixed dollar fee contract, depending on the customer's and the contractor's wishes. (Other types of contracts specified by OPS are cost plus with guaranteed limit, time and materials

and hourly jobs, and installed sales.)

"The contractor would be inclined to a lump sum contract if his profit, percentage-wise, is low and labor and materials have increased substantially."

"He would select a cost plus fixed percentage fee contract over a cost plus fixed dollar fee contract for the same reason since his profit with a percentage fee must be reduced only 10% while with the dollar fee contract his fee is not reduced but remains the same in dollar amount."

"However, if his profit percentage was high the contractor would do well to consider the dollar fee contract over the percentage fee contract. For those who cannot separate profit from overhead, the dollar fee contract would often be most attractive."

"So far as the terms of the contract go there would be no difference between a lump sum contract and installed sales. However, CPR 93 defines a lump sum contract as one where you figure a markup for profit and overhead upon both materials and labor, whereas an installed sale is figured with a markup on the equipment item only, a practice customary with many appliances."

Formulas for Various Types of Contracts

A—Highest percentage of markup for profit during base period (July 1, 1949 through June 24, 1950) for comparable contract (for illustration: 10%).

B—Highest percentage markup for overhead during base period for com-

parable contract (for illustration: 5%).

C—Highest percentage of markup for both overhead and profit during base period where they cannot be separated (for illustration: 15%).

D—Current estimated costs for lump sum contracts (for illustration: \$1,000).

E—Actual costs on cost-plus basis, as provided in contract (for illustration: \$1,000).

F—Highest dollar amount of fee on comparable contract during base period (for illustration: \$140).

(1) Lump Sum Contract

(A minus 1/10A plus B) times D plus D equals Guaranteed Limit, or (C minus 1/10C) times D plus D equals Guaranteed Limit.

Illustration: Same as under (1) above.

A minus 1/10A plus B equals Percentage Fee, or C minus 1/10C equals Percentage Fee.

Illustration: Same as under (2) above.

F equals Dollar Fee.

To E may be added either percentage fee or dollar fee, but final charge not to exceed guaranteed limit.

Illustration: Guaranteed Limit equals \$1,140 (A plus B) or \$1,135 (C).

Percentage Fee equals \$140 (A plus B) or \$135 (C).

Dollar Fee equals \$140.

Actual cost \$1,000 plus \$140 equals \$1,140 ceiling price.

(2) Cost Plus Fixed Percentage Fee Contract

A minus 1/10A plus B equals Ceiling Price Percentage Fee plus E, or

C minus 1/10C equals Ceiling Price Percentage Fee plus E.

Illustrations: 14% of \$1,000 or \$140 plus \$1,000 equals \$1,140 ceiling price. 13.5% of \$1,000 or \$135 plus \$1,000 equals \$1,135 ceiling price.

(3) Cost Plus Fixed Dollar Fee Contract

To F may be added E.

Illustration: \$140 plus \$1,000 equals \$1,140 ceiling price.

(4) Cost Plus Contract With Guaranteed Limit

(A minus 1/10A plus B) times D plus D equals Guaranteed Limit, or (C minus 1/10C) times D plus D equals Guaranteed Limit.

Illustration: Same as under (2) above.

Paltridge Named Sales Vice President for Reco Products Div.

PHILADELPHIA—Reco Products Div. of Refrigeration Engineering Corp. has announced the appointment of H. H. Paltridge as vice president in charge of sales and assistant to the president.

Paltridge has been associated with the refrigeration and air conditioning industry in design, production, field construction, and sales, continuously since 1931 except

for three years during the last war when he served as executive officer of a Seabee construction unit in North Africa and France.

Since 1948 Paltridge has been New York district manager for Baker Refrigeration Corp. and will continue in this capacity with the assistance of an increased staff.

Paltridge will be in charge of the new New York headquarters of Reco Products Div. and Reco International Div. located at 150 Nassau St., New York 38, N. Y.

Woolworth In Denver First Air Conditioned Dime Store In Colorado

DENVER—The first air conditioned variety store in Colorado will be a reality shortly when Woolworth's completes its huge new downtown five-and-ten store at 820 16th St. here.

The store represents not only a 200% increase in floor space, but many innovations new to the Rocky Mountain area, according to L. E. Chance, manager.

Included is an electric escalator, clothing departments, a lunch counter seating 100, a new electrical appliance department, and a staff of 400 people to facilitate service to customers.

An air conditioning system of 150 tons capacity will keep the store interior at around 80° during the warmth of summer weather. Chance said.

An air conditioning system of this size in the Mountain City is something of a rarity. However, despite low relative humidity and over-all aridness, Denver experiences many days through the summer months in which heat brings discomfort, it was stressed.

"The heat problem is particularly bad in a large volume store such as ours," Chance said. "With as many as 5,000 customers passing through the store during a single hour, the heat load, complicated by smoke, is such that we felt only mechanically refrigerated air conditioning could provide the proper comfort."

Not the least important consideration in connection with air conditioning of the Woolworth building has been employee morale and turnover, the management emphasized. Explosive turnover in past years was traced directly to humid, hot conditions throughout the store, officials declared.



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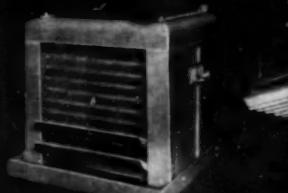


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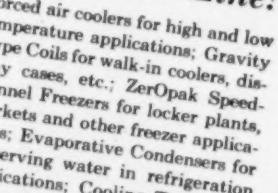
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1000 ft. per degree 70°, in heat load. The maximum short time load provides up to a minute for all types of temperature controlled food storage applications.

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Put our years of prime and sub-contracting defense work experience to work for you. Write or phone today. Prompt quotations without obligation.

G-12

Greene of Racine
GREENE Manufacturing Company, Inc., Racine, Wis.

New Heat Rating Code For Commercial, Home Heating Units Urged

SYRACUSE, N.Y.—Present methods of calculating capacity of heating units are not effective, according to Prof. Charles O. MacKey, chairman of Cornell University's mechanical engineering department.

Speaking before the Central New York Chapter of the American Society of Heating & Ventilating Engineers, Prof. MacKey urged the society to institute a program to write a new heat rating code for commercial and home heating units.

The manufacturer should not be allowed to set up his own code for heating equipment, he said, pointing to codes written by other engineering societies as the Society of Automotive Engineers, as examples.

Prof. MacKey termed calculations of heat transfer—the rate of heat released into the air by any heating unit—as "miscalculations" under the present code. Tests have shown, he said, that the real rate of heat transfer is seldom in agreement with calculated rate.

In his talk, Prof. MacKey also described the heat transfer tests conducted in the Cornell "cold room," a laboratory for testing heat emissions.

Members from the Rochester, Birmingham, and Rome-Utica areas also attended the meeting.

JUST ASK US!

Turn to "What's New" Page for useful information on new products

York Corp. Hits New Highs In Orders, Sales, Income

YORK, Pa.—New highs in orders booked, completed sales, and net income before taxes during the fiscal year ended Sept. 30 have been reported for York Corp. by R. E. Lauer, president.

Net income was \$2,656,311, equal to \$2.47 a common share. This compares with \$2,129,145, or \$1.91 a share, in the preceding year.

Lauer said the company has been hampered by government restrictions on materials, but he considers sales prospects as encouraging.

Air conditioning sales again represented the highest percentage of York's new business in 1951. However, sales of refrigeration products and systems, accessory equipment, supplies, repair parts, and maintenance contracts increased from the previous year.

Defense work accounted for a substantial share of business booked during the year, Lauer said.

Air Conditioning on Agenda At Ala. County Courthouse

SELMA, Ala.—According to the Dallas Board of Revenue, plans are being made to install air conditioning in the Dallas county courthouse. All rooms, except court rooms, will be equipped for cooling.

Plans call for completion of the project by April 1.

The cooling project will cost about \$35,000 to \$40,000, according to plans drawn up by Architect Raymond Buzemore, of Montgomery.

Partial Outside, Inside Loads Complicate Proper Control of Packaged Air Conditioners

NEW ORLEANS—What happens when the outside and inside loads become less than the maximums designed for, and how this complicates the problem of properly controlling a packaged air conditioner were outlined at the 47th annual ASRE meeting here by G. F. Keane, Carrier engineer, who presented results of actual tests in the field.

"As long as maximum latent and sensible heat gains are present you'll have no particular control problem," he declared. "However, these maximum loads may not be present, nor do they depart from the maximum at the same rate."

In his discussion Keane cited a restaurant and a department store as typical examples of applications, the restaurant being characterized by a heavy latent load, the department store having predominantly a heavier sensible load.

The variations in the load due to occupants has comparatively little effect on the indoor temperature and humidity with on-off control if the outside dry bulb and wet bulb temperatures are at the maximum design points, according to figures presented by Keane.

Here, for example, with an outside d.b. of 95°, w.b. of 75°, and 98.5 grains of moisture per pound of air, the conditions inside the restaurant would be 78° F. and 55% r.h. with 100% of the design "people load." At 50% people load, the inside conditions would be 76° F. at 52% r.h. At

20% people load, the figures were 76° F. and 50% r.h.

With corresponding percentages of people load, the department store conditions were 78° F. and 50% r.h.; 76° F. and 48% r.h.; 76° F. and 46% r.h.

Things begin to happen, though, when the outside conditions change, particularly if the dry bulb falls considerably more than the wet bulb, Keane indicated. This can be seen in Table 1.

Here are shown outside temperatures of 75° d.b. and 69° w.b. with a moisture content of 97 grains per pound, in contrast with the maximum design conditions of 95° d.b. and 75° w.b.

With "on-off" control the conditions inside the restaurant would be as follows: with 100% people loading—75° and 64% r.h.; with 50% occupancy—75° and 65% r.h.; with 20% load—75° and 66% r.h.

Keane explains that "with on-off control you get a higher relative humidity as people leave the restaurant. When the compressor stops, the unit is not removing moisture from the air that's present and as more air comes in you get re-evaporation from the coil."

This effect is less noticeable in a department store where the sensible load is much greater than the occupancy load and less outside air is used."

By using the "air by-pass" method of control, Keane shows in the second part of Table 1 that slightly better humidity conditions are obtained in the restaurant, at least as compared with on-off control. The dry bulb is held at 75° F. but the relative humidity is 61% at 100% occupancy, 62% at 50% occupancy, and 64% at 20% occupancy.

The department store showed 48% r.h. at 100% occupancy with air by-pass control, 38% r.h. at 20% load.

Best results in the restaurant under these outside conditions were achieved by means of reheat control, according to Keane's data as shown in the third section of Table 1. At 100% people load the relative humidity was 59%; at 50% load, 53% r.h.; at 20% load, 49% r.h.

"With reheat in the restaurant

system, the relative humidity is kept closer to design conditions and is reduced as people leave. The unit operates at full dehumidifying capacity," Keane explained. "The department store also shows good results by operating on reheat control."

Last section of the table gives Keane's figures for controlling a packaged air conditioner by modulating compressor capacity on the basis of room dry bulb temperature. Under the same outside conditions the humidity in the restaurant would be 66% even at 100% occupancy, he indicated.

"Having the compressor capacity controlled by the room dry bulb temperature gives the highest relative humidity and is not very satisfactory to use," the speaker declared.

"A better idea of the magnitude of departure from design conditions by on-off control is shown in the test results given in Table 2."

This compares the performance at partial loads with various types of on-off controls in an application having a low sensible heat factor such as a restaurant, and an application such as a shoe store having a high sensible heat factor.

Five different types of control arrangements are shown for each application: with outside air (1) normal off-on, (2) normal off-on but no outside air during "off" cycle, (3) fan off-on with compressor; with no outside air, (4) normal off-on, and (5) fan off-on with compressor.

Shown for these control arrangements in both types of applications are: the length of the "on" and "off" cycles in minutes; the range of the dry bulb temperatures maintained; and the maximum, minimum, and average relative humidities.

In all cases the dry bulb was limited to a range of 3°—from 75° to 78° F. Highest average relative humidity (69%) occurred in the restaurant operating on normal off-on control with outside air. The range in relative humidity under these conditions was from 66% to 72%.

Lowest average relative humidity in the restaurant was 62.5%, achieved by having the fan turn on and off with the cycling of the compressor.

(Concluded on next page)

for the life
of the system...
keep your
eye on the
LIQUID LEVEL



Let these outstanding Sight Glass features make your job easier—

- Tightly assembled and tested at the factory.
- Extended tubes which allow silver soldering without disassembly.
- Ample vision area.
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"DO" Orders are Vital!

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Filtrine products meet government specifications.

Promote your own condensing unit sales with Filtrine's 20-year-life construction . . . high capacity . . .
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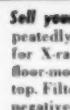
COOLERS FOR MESS HALLS — CAFETERIAS

 Sell your condensing unit with Filtrine Stainless Steel or Duco finished cabinets, equipped to suit with top/side shelves, bubblers, glass-filters. Can be Taste-Master equipped to remove chlorine, rust, sediment from water.



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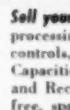
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 Sell your condensing unit with Filtrine models repeatedly named by V.A., Signal Corps, Air Force, etc. for X-ray and photo-labs. Under counter design and floor-mounted models with stainless steel work-table top. Filters (extra) to prevent scratched and pin-holed negatives.



PH-7 PH-14 PH-28

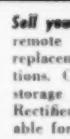
PACKAGED CIRCULATING CHILLED WATER SYSTEMS

 Sell your condensing unit! Systems for drinking or processing water—completely packaged with pump, controls, your condensing unit factory installed. Capacities 5-400 g.p.h.; storage 5-150 gals. Filters and Rectifier-Dechlorinators (extra) to insure taste-free, sparkling water.



Typical "Packaged" Circulating Chilled Water System

REMOTE COOLERS

 Sell your condensing unit with remote models for new and replacement jobs—all applications. Capacities 10-1000 g.p.h.; storage 7-300 gals. Filters, Rectifier-Dechlorinators available for all sizes.



Remote Model Coolers

 Get our new "How to Sell DO Jobs"—write Dept. RF1
FILTRINE MANUFACTURING COMPANY • BROOKLYN 5 • N.Y.

"Water Coolers and Filters for 40 Years"

Table 1—Room Conditions with Various Methods of Control on Mild, Damp Day

(Outside Temperature 75° d.b., 60° w.b., 97 Grains per Pound)		Department Store
Control Method	People Loading	Restaurant
On-Off	100%	75° F.—64%
	50%	75° F.—65%
	20%	75° F.—66%
Air By-pass	100%	75° F.—61%
	50%	75° F.—62%
	20%	75° F.—64%
Reheat	100%	75° F.—59%
	50%	75° F.—53%
	20%	75° F.—49%
Compressor Capacity	100%	75° F.—66%
Controlled by	50%	
Room Dry Bulb	20%	75° F.—63%

Table 2—Comparison of Performance at Partial Load With Various Control Arrangements

Type of Control Arrangement	Cycle Length Min. "On" "Off"	Range of Dry Bulb °F.	Maximum Relative Humidity (%)	Minimum Relative Humidity (%)	Average Relative Humidity (%)
Low Sensible Heat Factor Application (Restaurant)					
With Outside Air:					
Normal off-on	25	6	75-78	72	66
Normal off-on—no outside air on "off" cycle	25	8	75-78	68	63
Fan off-on with compressor	25	8	75-78	65	61.5
No Outside Air:					
Normal off-on	15	8	75-78	69	64
Fan off-on with compressor	15	8	75-78	65	60.5
High Sensible Heat Factor Application (Shoe Store)					
With Outside Air:					
Normal off-on	20	6	75-78	60	56
Normal off-on—no outside air on "off" cycle	20	8	75-78	57.5	54
Fan off-on with compressor	20	8	75-78	48	44.5
No Outside Air:					
Normal off-on	13	8	75-78	60	56.5
Fan off-on with compressor	13	8	75-78	47.5	44.5

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✓ HIGH STABILITY
✓ LOW WAX
✓ LOW MOISTURE

ANSUL OIL
150
THE ALL-TEMPERATURE
REFRIGERATION OIL
MANUFACTURED BY
REFRIGERANTS

THE FINEST REFRIGERATION OIL
...at any price!

THE NEW... IMPROVED... ANSUL REFRIGERATION OIL... IS A RESULT OF THE PERSISTENT SEARCH BY ANSUL CHEMISTS AND REFRIGERATION TECHNICIANS FOR THE FINEST QUALITY REFRIGERATION OIL... AT ANY PRICE!

Since Ansul Refrigeration Oil was introduced in 1949... its acceptance by refrigeration men has continued to expand. In only two short years Ansul is one of the leading refrigeration oils sold exclusively through Refrigeration Wholesalers.

The New... Improved Ansul Refrigeration Oil is now available at leading refrigeration wholesalers everywhere. It meets, or surpasses, every specification established by Ansul Research for a high quality refrigeration oil.

BUY IT NOW AT THE NEW LOW PRICE. Use it for more dependable, trouble-free lubrication.

NOTE THESE IMPORTANT ANSUL FEATURES —

- a. Lower floc point.
- b. 50% lower wax content.
- c. Moisture — ANSUL CONTROLLED minimum.
- d. Lower pour point.
- e. Rigidly checked for high stability.
- f. Lowest affinity for moisture.
- g. New low price.
- h. Available in quart, 1-gallon and 2-gallon cans; also in 5-gallon and 55-gallon steel containers.
- i. Improved features

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ANSUL SULFUR DIOXIDE • ANSUL METHYL CHLORIDE • ANSUL OIL • KINETIC "FRESH" REFRIGERANTS
ALSO MANUFACTURERS OF INDUSTRIAL CHEMICALS • DRY CHEMICAL FIRE EXTINGUISHERS

Partial Loads--

(Concluded from preceding page)
no outside air being admitted to the system.

In the shoe store (representing an application with high sensible heat factor) average relative humidity was 58% with normal on-off control both with and without outside air; 56% when no outside air was admitted during "off" cycle, and 46% on both types having the fan cycle with the compressor.

Commenting on the talk, D. D. Wile said, "I want to thank Keane for exposing what can happen when a package conditioner is not properly controlled."

Added Charles Neeson: "For 10 years I've had a 3-ton unit operating at home with reheat, the compressor being controlled by a humidistat. It maintains constant temperature and humidity conditions despite changes outside. It does cost more to operate, however, because the machine runs more than it would with simple on-off control."

Keane was asked: "Does reheat mean greater cost in operating an air conditioner?"

"Yes," he admitted, explaining that "with reheat we assume the compressor will run constantly."

Brandt Handles Airtemp Line in Dallas Area

DALLAS—The Chrysler Airtemp line of air conditioning and heating equipment will be handled by the Brandt Engineering Co., which has opened for business at 8402-A Hines Blvd.

Selling Electronic Equipment to Doctors Paves Way for Air Conditioner Sales

"It is very important that the dealer sell the customer the correct size units," Baldwin asserted, "otherwise, the customer will return the unit. As a matter of fact, I sincerely believe that dealers who sell air conditioning units without a thought to the proper size are hurting the industry more than any other thing."

Baldwin feels that manufacturer advertising can be improved so that the over-all virtues of air conditioning are brought home forcefully. For one thing, he said, the cleanliness benefits should be stressed more.

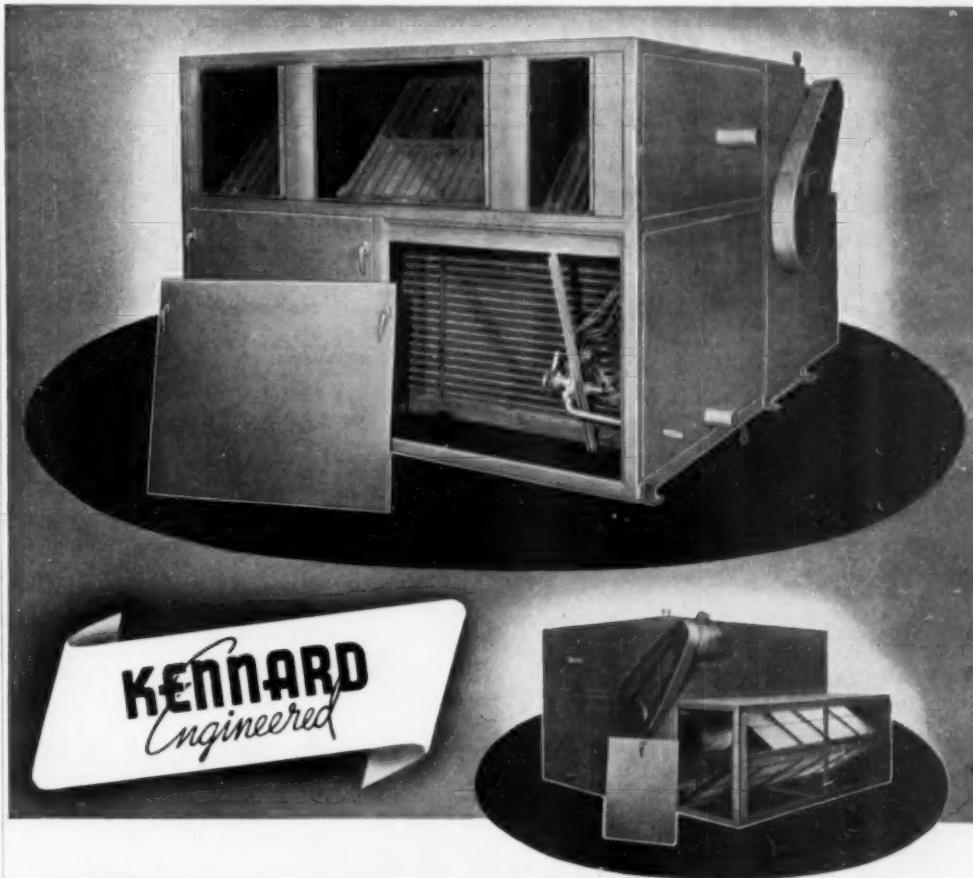
Carman Represents Viking In Midwestern Territory

CLEVELAND—Sales Manager Frank Gibbons of Viking Air Conditioning Corp. here has announced the appointment of John C. Carman as Viking's new representative in Michigan, northern Indiana, and northwestern Ohio.

Carman joins Viking with 12 years' experience in the heating field, having been an employee and officer of Detroit Heating Co. since 1936.

During that period he also became familiar with the heating business in much of the territory in which he will represent Viking.

During World War II Carman took leave of absence to work as field representative of the Detroit Diesel Engineering Div. of General Motors Corp. for three years.



Multi-Zone Units
COOLING-HEATING-ZONE CONTROL

Each zone of the Multi-Zone Air Conditioning Unit can supply independently of the other zones heating or cooling as required by load conditions. This is accomplished by individual control of separately built in dampers for each zone.

Sizes up to 19,800 CFM—coils for direct expansion, chilled water, steam or hot water. Filters, humidifier and mixing box optionally available.

Features of Construction—Penta-Post frame members provide maximum strength and stiffness with

a minimum of weight—Sectionalized construction facilitates erection, field handling and shipment—Fire resistant insulation, moisture sealed—Multiple service and access panels.

Representatives in Principal Cities

Write for name of nearest representative and complete information on Air Conditioning Blower Units—Finned Coils—Evaporative Condensers—Cooling Towers—Sprayed Coil Dehumidifiers—Heating and Ventilating Units.

KENNARD CORPORATION • 1825 S. HANLEY ROAD
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What's New

When requesting further information on new products, please use "Information Center" form.

Acme Introduces New Line of Space Savers



KEY NO. B-120

LONG ISLAND CITY, N. Y. A new line of "space-saving" refrigerators is being manufactured by Acme-National Refrigeration Co., Inc., here.

The line consists of four models: the "Refrigidrawer," the "Spa-Saver" (model SD-51), and two combination refrigerator-range units. Features of the line include: Tefumach compressor unit with five-year warranty; cabinet of heavy-gauge reinforced

steel; Fiberglas insulation, du Pont Dulux finish, and temperature control.

Measuring 35 in. high, 27 in. wide, and 25 in. deep, the Refrigidrawer (model SD-76) is claimed to have "as much capacity as the average 9-cu. ft. unit." It provides 6 sq. ft. of extra work-table surface. Drawers of the box glide on floating nylon bearings and an automatic door lock "seals in the cold."

Model SD-51 measures 35 in. high, 24 in. wide, and 23½ in. deep. This unit has a storage space of 5.1 cu. ft. and a shelf area of approximately 11 sq. ft., given the kitchen 5 sq. ft. of additional working area, and is equipped with an automatic internal light.

Capacity of the combination models is given as 5.6 cu. ft. and the shelf area as about 10 sq. ft. They are 35 in. high, 27 in. wide, and 26½ in. deep. Both have automatic internal lights and extra-heavy insulation to prevent cooking heat from affecting refrigeration temperatures.

The refrigerator and electric range combination (model RE-5) has two Monoblock elements. Models are available with a choice of 110 or 220 volts. The refrigerator and gas range combination is provided with four full-size removable burners.

They SEE more... THEY BUY more!



Full Vision Low Temperature MERCHANDISERS

ACE Merchandisers were designed to do one job and ONE JOB ONLY—Sell merchandise fast! That is why you see more and more ACE units in busy stores throughout America. Certainly it takes a lot of engineering know-how and a terrific amount of styling research... the end result speaks for itself, for store owners everywhere say, "The busiest place is around the ACE!" Where there's action there's PROFIT!

We want you to know more about ACE Cabinets. Drop us a line for complete information on the greatest PROFIT line in the country.

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New Bedford, Mass.

Please address all inquiries to: Exec. Sales Office:
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Export Dept.: 39 Broadway, New York 6, N. Y.

Manufacturers of Frozen Food Display Cabinets, Ice Cream Dispensing Cabinets, Farm Freezers and Bobtails.



'Por-Rok' Replaces Lead For Setting Anchor Bolts

KEY NO. B-121

CLEVELAND—Anchor bolts for permanently fastening machinery or equipment of any type to concrete can be set "quickly, easily, and with complete safety" by using "Por-Rok" cement, according to The Hallemite Mfg. Co. here.

The company claims that the product successfully replaces critical lead and sulphur for most bolt-setting operations. Since it is applied cold, there is no heating hazard, according to the manufacturer.

The user merely drills a hole, sets the bolt in place, mixes Por-Rok with water, and pours the compound into the opening around the bolt. Within 15 to 30 minutes, the bolt is anchored permanently, the company says.

"Por-Rok is self-bonding, self-leveling, oil-resistant, and will not shrink," Hallemite declared. "It has a compression strength of 4,500 p.s.i."

2 'Dari-Vend' Models Offer Low Cost, Compactness

side," according to the company. List prices to retail outlets are: model 108, \$398; model 192, \$538.

Common features of both models are all-steel welded construction, fluorescent lights under attractive canopy, mirrored back for mass display, glass side "wings," hard-baked enamel finish, fiber-board night cover, wrap-around refrigeration coils, "Fiberglas" insulation, and cold control. They are delivered ready to unpack and plug in.

Respective capacities of the models are given as 108 and 192 quart cartons, double stacked.

Model 108 measures 30 in. wide, 21½ in. deep, and 54 in. high (over canopy), and requires 4½ sq. ft. of floor space. There is a mezzanine shelf (29 in. by 7 in.) in the canopy for non-refrigerated allied items. The cabinet is powered by a ½-hp. Tecumseh hermetically-sealed unit.

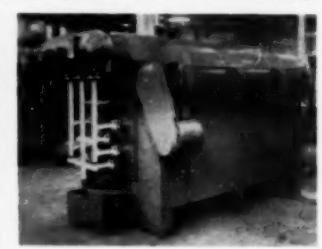
Model 192 is 51½ in. wide, 21½ in. deep, and 54 in. high (over canopy). It occupies a floor space of 7½ sq. ft. The mezzanine shelf in this model measures 48½ in. by 7 in. The cabinet uses a ½-hp. Tecumseh unit.



KEY NO. B-123

CHICAGO—Two new "low-cost" refrigerated self-service milk merchandisers, "Dari-Vend" models 108 and 192, have been announced by General Vending Machine Corp. here.

The company emphasized that the compact display cabinets are regular food store milk merchandisers and are not coin-operated vending machines. The models are said to be "ideal for merchandising milk in one half of the cabinet and allied products such as cheese, bacon, etc., in a wire basket or tray in the other



Niagara Improves 'No Frost Spray Cooler'

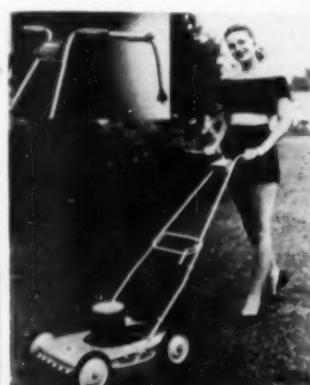
KEY NO. B-125

NEW YORK CITY—Niagara Blower Co. announced an improved model "No Frost Spray Cooler" applying to the refrigeration and refrigerated storage of products sensitive to the moisture content of the air, especially foods which are liable to dry out, shrink, or discolor in cold dry air.

The equipment differs from previous models in that the air enters through the fans and is blown through the units. The air passes over refrigeration coils and through a spray of "No Frost" liquid solution which prevents the condensation of water and the formation of ice or frost on the coils.

"The chilled air, which may be as low as -20° F., passes direct from the spray chamber into the room," the company explained. "Thus it contains no reheat from the energy of the fans and, therefore, higher humidity air is made available.

"With no loss of cooling capacity from accumulation of frost on the refrigerating coils, no interruption for defrosting, and no reheat added to the air, closer control of conditions is obtained with resulting improvement in the quality of products held in refrigerated storage. This is valuable for eggs and perishables."



Huffy Mower Features 'Cord Control' Handle

KEY NO. B-122

DAYTON—A feature of the 1952 "Huffy Mower" is a new handle extension which eliminates cord handling by extending the power cord out beyond the path of the operator.

Called "Cord Control," the extension slides into either side of the mower's flip-over handle, according to the manufacturer, Huffman Mfg. Co., Mower Div.

Another new Huffy feature is a "twist-release" cord hook which eliminates the need to unwind the cord. The complete cord lifts off and the mower is ready to go.

Jordon Announces Sliding Door Wall Case

KEY NO. B-124

PHILADELPHIA—A self-contained, sliding door, 4½-ft. wall case in either white or stainless steel exterior finish has been announced by the Jordon Refrigerator Co., Inc., here.

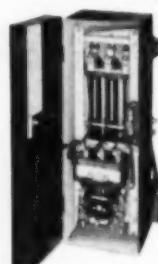
The sliding doors are equipped with triple-thick Thermopane display glass in polished extruded aluminum frames. The case is powered by a self-contained ½-hp. hermetically sealed condensing unit and has the exclusive Jordon "Air Master" cooling system to provide rapid cooling and high relative humidity.

The Air Master system provides a more effective method of air circulation because cooled air is recirculated, thereby lessening wear on the refrigeration system and lowering operating costs, Jordon declared.

The models W (white) and S (stainless) 4½-ft. wall case have a capacity of approximately 20 cases of standard 12-oz. bottles. Over-all dimensions are 71½ in. high, 53 in. long, and 33 in. deep, including doors and hardware.

VELVET-SMOOTH COMPRESSOR STARTER

No Jolts to Belts or Machines—No Heavy Current Inrush



ALLEN-BRADLEY MOTOR CONTROLS
for Air-Conditioning and Refrigeration.
Manual & automatic across-the-line starters.
Compression-type velvet-smooth starters.
Pressure and temperature switches & controls.
Relays and conductors from 1 to 8 poles.
Push buttons and selector switches.



ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

What's New (Cont.)

Universal Announces New Series of Air Diffusers



KEY NO. B-126

NEW YORK CITY—Universal Diffuser Corp. here has announced the development of a new series of adjustable air diffusers called "Flexifo."

The diffuser with its variable effective area is said to permit adjustment of the air flow for any setting from zero to full volume or changes in the air throw, without changing the characteristic air diffusion pattern.

The diffuser proper consists of a double-flanged conical spiral in which the continuous blades are flexibly held in position by means of radial spokes and connected to the main cross bar by means of a threaded center rod.

By turning the center rod knob, the continuous diffuser blades may be shifted to any position from closed to wide open, thus providing variable adjustment of the effective area with resulting volume and throw changes, while the air diffusion pattern remains constant.

The Flexifo is claimed to be the only diffuser on the market that has an equalizing deflector as an integral part of the equipment.

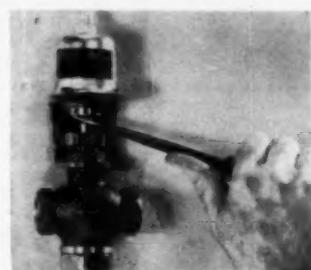
"Therefore," the manufacturer said, "no additional installation work is required to put them in place. The deflector vanes are individually movable and will remain fixed in any position."

Besides acting as instruments to direct the flow of air and to equalize its flow, they can be used to restrict the volume in case a large reduction in neck velocity should become necessary after installation. All adjustments are made after the Flexifo is installed."

In action, the Flexifo diffuser "simulates an infinite number of con-

centric jets. The air, on leaving the blades travels parallel to the ceiling. The low pressure area developed by the temporary high speed of the air creates a high aspirating effect resulting in a large entrainment of room air which rapidly mixes with the air from the duct and quickly equalizes the temperature."

The Flexifo diffuser is available in 11 sizes, the largest being capable of handling up to 9,000 c.f.m. with a throw of over 48 ft., it was stated.



Manual Flush Featured In Electromatic Valves

KEY NO. B-127

SKOKIE, ILL.—A new manual flush feature is now being incorporated in the Electromatic WP, WK, and WJ condenser water regulating valves, the company announced.

This feature is claimed to provide a simple method of removing harmful dirt and grit from the line after the valve has been installed.

To flush, an adjustment screw is turned clockwise as far as possible and then a screw driver is inserted between the adjustment screw and the top of the push pin. The push pin can then be pried down and the valve held open.

After the valve has been thoroughly flushed it may be reset by removing the screw driver and setting the adjustment screw at the desired head pressure.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No. Key No.
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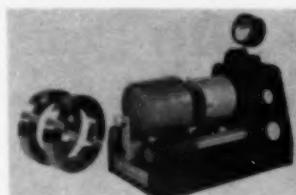
Products Advertised
(list name, page, and issue date)

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Name Title
 Company
 Street
 City Zone State
 Type of Business

MAIL THIS FORM TO

AIR CONDITIONING & REFRIGERATION NEWS
Reader Service Dept.,
450 W. FORT ST. DETROIT 26, MICHIGAN



Pratt & Whitney Develops Housing Bore Gauge

KEY NO. B-128

WEST HARTFORD, Conn.—Pratt & Whitney, Div. Niles-Bement-Pond Co., has developed a special "Air-O-Limit" gauging fixture for checking the bores of refrigerator compressor housings.

These housings are deep drawn sheet steel," the company said. "They have an average internal diameter tolerance of .002 in., and a maximum out-of-round tolerance of .015 in. The gauge checks the housing bore for average diameter at several points along the entire length of the housing wall."

The gauge has a ball bearing slide on which the housing is located from its outside diameter, it was explained. This slide is also used to move the housing on and off the gauging plug.

The gauging plug has six cartridge-type gauging nozzles that feed from one gauging unit. The amount of air that escapes from these nozzles combines to give an average diameter reading on the indicating meter.

The indicating meter is calibrated with full scale of .016 in., the company stated.

'Rustshield' Keeps Ferrous Surfaces from Corroding

KEY NO. B-129

STATEN ISLAND, N. Y.—Moving parts made from iron and steel can get two-fold protection with a chemical treatment announced by Octagon Process, Inc. here.

Known as "Rustshield 2," it is a phosphatizing compound which changes steel and iron surfaces to rustproof, highly absorbent non-metallic areas. Such a "Rustshielded" steel surface, with vastly increased surface area, is an ideal base for the retention of lubricating oils, according to the company.

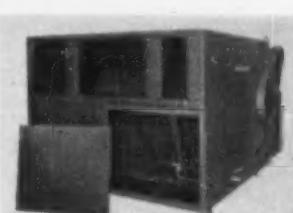
This surface is a coating produced from chemical interaction of the phosphate solution and the metal surface; thus, it has greater adhesion than any physically-bonded coating could have, the company claims. Metal parts so treated will remain properly lubricated far longer than smooth steel surfaces, it is said.

Rustshield 2 is usually applied to rubbing and sliding surfaces of precision parts such as thrust washers, pump pistons, gears, valve roller pins, stems and guides, as well as bearing surfaces of every type. Although parts treated in this manner are corrosion resistant, the degree of such resistance can be increased by finishing with a drying oil or wax such as yellow beeswax.

Close tolerances are reportedly unaffected by the phosphate treatment.

Rustshielding is described as a simple, inexpensive immersion process which consists of pre-cleaning with vapor degreaser, safety solvent, or an alkali cleaner especially designed for cleaning prior to phosphating (such as Octagon 400).

Cleaning is followed by rinsing, Rustshielding, rinsing, and final treatment with a passivating agent, such as Neutralite solution. The Rustshield liquid is applied by hot immersion, and outside of a stainless steel tank, requires no special equipment.



Kennard Designs Units for Zone Controlled Operation

KEY NO. B-1210

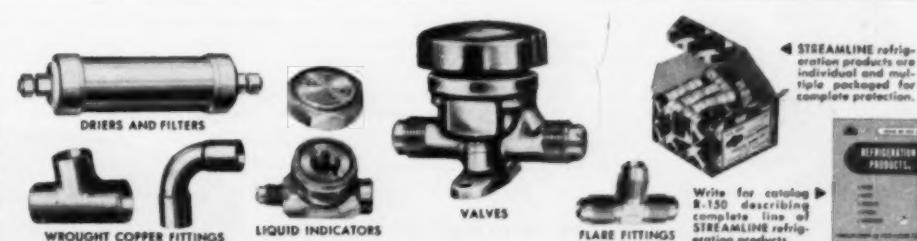
ST. LOUIS—Multi-zone air conditioning units designed to provide heating or cooling as required by zones are being manufactured by Kennard Corp. here in sizes up to 19,800 c.f.m.

Each zone operates independently of the other, furnishing either cool or warm air as required, the company said. This is accomplished by individual control of separate built-in face and by-pass dampers for each zone and by arranging the heating and cooling coils in parallel rather than in series, it was explained.



IT PAYS to climb on the MUELLER BRASS CO. band wagon for . . .

- A full and complete quality line of protectively packaged refrigeration driers, valves, fittings and accessories—stocked and sold by your refrigeration wholesaler.
- Complete manufacturing facilities—from raw material to delivered product—under the strict control of Mueller Brass Co. craftsmen, technicians and engineers.
- A large, well-trained force of sales and field engineers to coordinate the laboratory and manufacturing facilities of the Mueller Brass Co. with your needs.



STREAMLINE refrigeration products are individual and multiple packed for complete protection.



Write for catalog R-150 describing complete line of STREAMLINE refrigeration products.

MUELLER BRASS CO., PORT HURON 10, MICHIGAN

Refrigeration, Air Conditioning In Cracker Plant

Temperature, Humidity Control from Raw Materials to Finished Products
Speeds Output, Cuts Cost, and Improves End Result for N.B.C.

PORTLAND, Ore.—Refrigeration and air conditioning at nearly every step in the process help the National Biscuit Co.'s newest bakery here turn out more than 26,000 miles of crackers and cookies a month.

From the storing of raw materials to the packaging of the crackers in waxed paper, refrigeration and air conditioning, specially designed for the plant by York Corp., are active and necessary participants.

The bakery which is nearly four city blocks in length, has three refrigerated rooms for storage purposes in the bakery proper. In addition a 120-ft. tower on top of the building is used to store many of the ingredients which go into making the 33 well-known products baked at this plant.

The temperature of the tower is

thermostatically maintained the year-round at 75 to 80° F. which the company officials regard as the ideal storage condition for these materials.

For those more perishable products such as milk, eggs, and particularly shortening, carefully refrigerated storage rooms have been provided which maintain constant temperatures.

The combined storage space of all three refrigerated areas in the bakery is equal to 84,000 cu. ft., yet the total brake horsepower of the "Freon-12" condensing units to provide adequate refrigeration for these spaces is only 22½ hp.

All operating and production standards have been met, while maximum efficiency has been developed together with economy of space in this installation.

In one month this bakery's order for raw materials includes over three and three-quarter million pounds of flour, nearly a half million pounds of sugar, and more than half a million pounds of shortening.

Chocolate, cocoa, soda, cheese, eggs, molasses, yeast, and honey add up to over three hundred thousand pounds. Eggs alone are over forty-five hundred pounds . . . a real grocery order!

Waxed Paper Stored In Controlled Temperatures

Controlled temperatures have been provided for waxed paper storage. This plant wraps up 182,050 lbs. of waxed paper to seal one month's production, so the storage room has to be cooled and held at specific temperatures. Otherwise the heat created by the ponderous weight of the paper would cause the wax to melt, sticking the surfaces together and rendering the paper useless for the bakery's purposes.

Flour is also handled with "kid gloves." It is unloaded right from the railroad cars into the pneumatic tube system which sucks it up into one of the 13 steel bins located in the storage tower. Each bin has a capacity of 60,000 lbs. and maintains a year-round temperature between 75 and 80° F.

Raisins, cheese, molasses, and other such perishables are stored in large refrigerator rooms, located near the rail unloading dock, where temperatures are held at 55° F. This is one of the three storage areas in the bakery proper, each with its individually controlled temperature.

When the plant is ready to prepare an order, all ingredients which go into the making have been readied in advance, and are in proper condition for mixing. The shortening has been chilled in its storage area as have been the flour and other items such as milk, water, and certain flavorings like cocoa and chocolate.

Lowering Dough Temperatures With FlakIce

In preparing the mix for certain baked goods, FlakIce is often used either without water or in combination with it to lower dough temperatures. A FlakIce machine, capable of automatically producing daily nearly 2½ tons of ribbons, bears the ice burden. This ice, which goes into the mix, is as pure as the water from which it is made, and need not be touched by human hands.

An ingredient water system employing a York V/W ammonia compressor can lower the temperature of the Portland water used in the bakery to 33° F.

Maintaining proper temperatures for every ingredient going into the products is a vital step performed in the refrigerator rooms. Later in the

"sponge" and "proof" rooms temperatures are double-checked.

The problem is not alone one of maintaining temperature. It is one of also maintaining humidity plus control of air motion or circulation. Should any of these three factors become unbalanced, many hundreds of pounds of finely prepared dough might be rendered worthless.

The "sponge" and "proof" room systems at the Portland plant have been created to obviate any such hazards. Automatic humidity controls, thermostats, aspirating cabinets, and electro-pneumatic switches are employed to maintain constant humidity and temperature.

Should the rooms become too dry, the automatic "watchmen" signal the humidifying system to begin spraying fine jets of water until the required humidity is obtained.

The spray is so fine and is so quickly dissipated into the air that it can't be felt. And should the automatic, super-sensitive watchmen discover the rooms to be too wet, immediately a dehumidifier starts up.

All of these actions take place instantaneously, and are plotted automatically on charts and graphs. Bakery officials feel that this system represents one of the ultimates in dough conditioning. Every particle of conditioned air is completely filtered, for care is constantly exercised to insure that not even the most minute foreign body ever slips into a product.

After the product has been shaped, it travels in orderly rows onto the steel baking bands and thence into the ovens. So closely timed and controlled are they and so vast their capacity, that in one eight-hour baking period one large oven alone will bake 4,200,000 crackers!

Enrober Tunnels for Chocolate Cookies

Possibly the most unusual application of refrigeration to the new Portland bakery is the enrober tunnels where cookies are literally bathed in chocolate.

These tunnels, located in the icing department, are actually long metal tunnels lined with refrigerated coils and piping. After being "chocolated" the cakes, or cookies, pass slowly through these refrigerated tunnels where the icings settle and crisp.

There are four such "enrobers," each with its own refrigeration unit to provide the chill necessary for solidifying the warm icings.

Each cookie or cracker, as it moves from the ovens to a conveyor belt on its journey to the packing tables, must be carefully cooled to permit packaging at an exact temperature. Each product must have its own specially timed trip so that it reaches the packer at just the right temperature.

E. M. Brown Co. Opens

AIKEN, S. C.—The Edward M. Brown Co., a new commercial refrigeration and heating concern, has just opened for business at 1908 Park Ave. Edward M. Brown, formerly associated with the Jones Electric Co., is proprietor.

N. O. Nelson Appoints Depperman Gen. Mgr.

ST. LOUIS—Leo J. Bachie, president of the N. O. Nelson Co., has announced the appointment, effective Jan. 1, of O. F. Depperman as first vice president and general manager. Depperman was formerly vice president in charge of sales.

Other appointments include W. M. McKinney, former Memphis branch manager, to vice president and manager of branches.

Geo. W. Hoffmann assumes duties of supervisor of Missouri and Illinois branches. Hoffmann was formerly manager of the St. Louis branch.

Management of the St. Louis branch has been given to J. V. McDonald, formerly executive assistant in the home office. F. A. Rickly will aid McDonald as assistant St. Louis branch manager.

Formerly assistant branch manager at Memphis, M. L. Taylor has been named manager to succeed McKinney.

The N. O. Nelson Co. operates branches in St. Louis, Cape Girardeau, and Jefferson City, Mo.; Alton and Marion, Ill.; Memphis, Tenn.; Little Rock, Ark.; Jackson, Miss.; Dallas, Waco, Wichita Falls, Houston, Austin, Beaumont, and Victoria, Texas; Pueblo, Colo.; and Salt Lake City.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

Buy Peerless FOR PERFORMANCE

Flash Coolers Fin Coils Flash Pans

The Peerless Line of quality products is designed and constructed to meet every demand of modern commercial refrigeration. Our Flash Coolers, Fin Coils and Flash Cooler Pans have proved their superiority in performance under widely varying operating conditions. They are built with an eye to appearance, economy of space, and the utmost convenience in installation and servicing. Louvers fabricated from polished aluminum. Made in a wide variety of standardized sizes and styles—all of unchallenged Peerless quality. Write for Bulletin 49G today.

Peerless of America, Inc.
1501 No. Magnolia Avenue
Chicago 22, Illinois, U.S.A.

Refrigeration Manufacturer Calls Klixon Protectors Dependable Watchmen

SMYRNA, DELA.: Arthur Stokesburg, Jr. of Wilson Refrigeration, Inc. knows from experience that Klixon Protectors stop motor burnouts.

"In our manufacturing of Milk Coolers and Farm Freezers we have had ample opportunity to observe the worth of Klixon Protectors, especially in rural areas where low voltage might occur—due to old wiring or wire of insufficient size to carry the load. We find that by using Klixon Protectors on all condensing units, we have a dependable watchman night and day to protect the condensing unit motor from burning out."

Klixon Protectors Build Customer Goodwill by Preventing Major Repair Costs

The Klixon Protectors, illustrated, are built into the motor by the motor manufacturer. In such equipment as refrigerators, oil burners, washing machines, etc., they keep motors working by preventing burnouts. If you would like increased customer-preference, reduced service calls and minimized repairs and replacements, it will pay you well to ask for equipment with Klixon Protectors.



SPENCER THERMOSTAT
Division of Metals & Controls Corp.
3401 FOREST ST., ATTLEBORO, MASS.

PROBLEM: How to Help Fountains BEAT Rising Costs and Ceiling Prices?



ANSWER: Switch to Sweden AND STRETCH PROFIT MARGINS

A Model for Every Need



MODEL 1-131A20
(At left)—Batch-feeding freezer for busy fountains... Automatic filling during rush periods from refrigerated stainless steel supply tanks. Compact... easy to operate and keep clean.

SWEDEN SPEED FREEZERS

For details, refer to classified phone listing "Ice Cream Freezers" for your local dealer; or write, wire or phone SWEDEN FREEZER MANUFACTURING CO. DEPT. 8-1 SEATTLE 99, WASHINGTON



20-TON CENTRAL SYSTEM is located on the fourth floor of the Hamilton municipal building. System air conditions the city utility offices, council chamber, city manager's office, and offices of the director of utilities.



THIS 1/2-TON WINDOW UNIT keeps this police radio room cool. Room is packed with heat-generating radio equipment, and close to the roof which added to heat load.

Refrigeration, Air Conditioning In Municipal Building Provide Employee Comfort and Increase Efficiency

HAMILTON, Ohio—Air conditioning and refrigeration are playing increasingly important roles in all fields of human endeavor, including governmental operations.

A city government that has taken advantage of modern refrigeration equipment to improve its activities is found in Hamilton, Ohio, a trading and industrial center of about 60,000 persons.

The Municipal building here, one of the most modern in the country, is equipped with refrigerating equipment with a combined cooling capacity of more than 35 tons.

Refrigeration equipment includes two large central system air conditioners, one of 20-ton capacity and the other, 15-ton; two 1/2-hp. window room air conditioners; and a large central water refrigeration system providing fresh, cool water for three remote drinking fountains. All equipment was installed by the Allied Refrigeration Co., Frigidaire commercial refrigeration dealer in Hamilton.

Installed in a large machine room on the west side of the fourth floor is the large 20-ton central system which supplies cool, fresh, filtered, air to the utility offices, council chamber, city manager's offices, and utility director's offices.

This unit is comprised of a heavy-duty water-cooled compressor of 20 hp., three large refrigerant-type coils, and the necessary controls. The installation utilizes an air-wash chamber for the purpose of filtering the complete air delivery.

This air is passed through a very fine spraying chamber, equipped with 12 spray nozzles. These are installed immediately ahead of a drift eliminator to prevent water from passing into the air stream. Approximately 5,000 cu. ft. of air per minute

moves through this chamber.

Refrigerant coils are located in the air supply duct immediately after the duct leaves a centrifugal blower. Coils are built-up, stacked in a vertical position, and completely insulated. Approximately 25% of fresh air is mixed with return air before entry into the air-wash chamber. Automatic control dampers are included. Due to the extremely quiet operation of this unit, no objectional noise is transferred to any part of the building.

Another interesting feature of this large 20-ton central system air conditioner is the fact that the compressor is equipped with a step-controller which automatically cuts out two of the four cylinders when load requirements are at a minimum.

When load requirements are heavy, the two idle cylinders are put back into operation automatically by the controller. This feature serves to reduce the operational expense of the unit. A series of hidden ducts carry the conditioned air to various departments in the west wing of the building.

In addition to the central system, a 1/2-ton Frigidaire window room air conditioner is installed in the office of the director of public works.

In the basement of the east wing of the building is installed another large Frigidaire central system air conditioner of similar design but with a refrigeration capacity of 15 tons. This unit supplies conditioned air to the police department and municipal court chambers.

The police department on the first floor consists of six offices, plus a large receiving room for the desk sergeant. All offices with the exception of the sergeant's room are provided with wall-type air conditioners.

ing grilles. A large anemostat is located in the desk sergeant's room.

The municipal court chambers on the second floor consist of a main courtroom, library, judge's chamber and office. Wall-type grilles are used for air conditioning.

It is interesting to note that this

particular central system unit has been in operation for 12 years. During that period only one servicing job, and a minor one at that, has been necessary.

A feature in the police department air conditioning system is in the short-wave radio room, which is located on the fourth floor. Because it is packed with radio and electronic equipment, and because of its proximity to the roof, this small room generated oven-like heat.

A 1/2-ton room air conditioner was installed in the single window of this room.

LOOK to LARKIN
for Low Prices



LARKIN CEILING HUMI-TEMP

Price is only one factor in the selection of any product—especially one that has an important task as protecting valuable perishables. Performance must come first. Quality cannot be overlooked. Durability is highly important. Larkin has all of these. And Larkin has low prices, too. Compare them and see for yourself how low they really are.

For the latest Larkin price list, see your wholesaler. If you wish, write direct to us and we shall be glad to send you one.

Manufacturers of the original Cross-Fin Coil—Humi-Temp Units—Executive and Air Cooled Condensers—Air Conditioning Units and Coils—Direct Expansion Water Coolers—Steel Vacuum Plate Coils—Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS
312 MEMORIAL RD., S.E., CLEVELAND 22

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

NEW DOUBLE-FLOW AQUATOWER

Marley Introduces Lowest Silhouette, Lowest Pumping Head Cooling Towers For Intermediate Capacities



7 STANDARD SIZES

AN EASY ERECT

with Asbestos Cement Basins

New Simplicity • New Accessibility • New Efficiency

Celanese Corp. Uses 6420 Horsepower of Frick Refrigeration

Fourteen Frick refrigerating machines are in operation at the Amcels plant of Celanese Corporation of America, near Cumberland, Md., makers of chemical yarns. Most of these ammonia compressors have been in use since 1929. The motors driving the new vertical machines, shown in the foreground, are each of 1250 hp.

This is a large-scale example of the dependability and economy of Frick ammonia refrigeration. Power requirements, when operating in summer weather on air conditioning loads, are only 0.70 hp. per ton of refrigeration.

The really important jobs, whether for air conditioning, ice making, or other commercial cooling work, call for FRICK refrigeration.

Producers of
DOUBLE-FLOW TOWERS
AQUATOWERS
VAIRFLO TOWERS
CONVENTIONAL TOWERS
DIRCOLERS
NATURAL DRAFT TOWERS
SPRAY NOZZLES



The Marley Company, Inc.

222 West Gregory, Kansas City 5, Mo.



nailless Redwood filling that is very easily installed or removed is another adaptation. All basin fixtures are readily at hand. Double-Flow Aquatower mechanical equipment is all designed, manufactured and guaranteed by Marley specifically for cooling tower usage . . . and it is all completely accessible.

You'll want complete details of this tower that will fit many installations in many industries, typical of which are those requiring 50 tons or more of refrigeration. Fill out the coupon below and you will receive it immediately.

Send me your 8-page brochure on the new Marley DOUBLE-FLOW AQUATOWER.

Name _____

Firm _____

Address _____

City _____

State _____

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience, embracing all types of advertising and merchandising he brings his counsel to the small business man.

By James D. Woolf

Is the Customer Simple-Minded?

The basic theorem of advertising asserts a current article in *Fortune* is that the customer is simple-minded.

It is my observation that this notion is embraced, either overtly or covertly, by many advertisers and advertising men.

What does the *Fortune* writer mean by "simple-minded"? I wonder? What does it mean to you? How you define the term and how devoutly you believe in your definition can make you either a good advertising man or a bad one.

We all know that the average American can be foolish and gullible. On every hand we see abundant evidence of his folly and frankness. We see millions of him now—an incred-

ing exaggerations, half-truths, and phony research findings.

We see millions of Americans respond to advertising appeals that are vulgar, cheap, and shabby.

But does this mean, in the literal and extreme sense of the term, that the customer is actually simple-minded? A nitwit? A dope? A jackass? Does it mean that the customer is so slaphappy that he has no curiosity about the worth of the things he spends his money for? Does it mean that he is indifferent to decency and honesty in advertising? Does it mean that he is so dimwitted that he feels no resentment when he has been lied to and bamboozled?

MAYBE AD MEN ARE SIMPLE-MINDED

I do not believe that "simple-minded" means any such thing. The customer's alleged 12-year-old mentality does not make him an imbecile. His preference for the funnier over the editorial page does not make him an idiot. His weakness in radio for banality and cheap burlesque does not make him a mental defective. His tolerance of and response to the cheap and tawdry does not make him feeble-minded. The delight of his wife in soap opera and *Hedda Hopper* does not mean that she is an incompetent wife and mother.

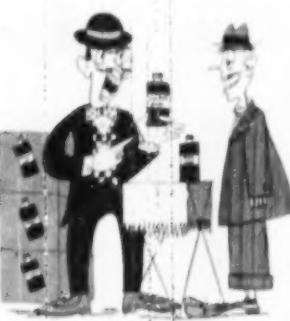
This low opinion of the customer prevails in many advertising circles. The research boys, I think, are largely to blame. Dr. Gallup tells us that 40% of the American people have never heard of the League of Nations, or that 16% of the Mississippians don't know that Columbus discovered America. Or Dr. Starch reveals that a vulgar, imbecile ad was three times better read than, say, the clean, mannerly, sensible and believable color pages on *Crisco* or *Jello*.

Ad men and advertisers seem to be losing faith in straightforward, honest, decently restrained, factual copy. Since the customer is so simple-minded, why be so foolish as to appeal to his 12-year-old "mentality"?

THE MAD CRAZE FOR GIMMICKS

"Your copy is fine," advertisers say to copy men, "but where's the gimmick?"

"A gimmick," as defined by Webster's Dictionary, "is any small device used secretly by a magician in performing a trick." Scratch out "secret" from that definition and you have a pretty fair description of an advertising gimmick. It can be a



"A Better Tomorrow" in a patent medicine bottle!

tic spectacle!—actually believing that he will find "A Better Tomorrow" in a bottle of patent medicine. We see how retail stores all over the nation are beguiling and betraying the people with fake bargain sales day after day. We see—today more than ever before—the reliance of advertisers on unbelievable claims, patent

TO REPLACE
CARBON
TET
FOR
SHOP
USE
SEE YOUR LOCAL JOBBER

your local jobber

"Your copy is fine," advertisers say to copy men, "but where's the gimmick?"

"A gimmick," as defined by Webster's Dictionary, "is any small device used secretly by a magician in performing a trick." Scratch out "secret" from that definition and you have a pretty fair description of an advertising gimmick. It can be a

premium ranging from a tin whistle to a free trip around the world.

But too often it is a falsity or half-truth based on phony research findings and the testimony of "authorities." It is frequently a copy theme that promises a benefit the product cannot deliver. Sometimes it is merely a single word, freshly coined to exaggerate dramatically the addition of a mildly useful new product ingredient. "Now science announces Zelite—the amazing polishing agent in Gleam Stardust." In retail advertising, as already stated, the most outrageous gimmick of all is the cut-price bargain sale.

These chicaneries in advertising doubtless get results. But not because the customer is simple-minded in the jackass sense of the word. He is merely gullible, even as you and I. For millions it is their credulity and their trusting faith in "A Better Tomorrow" that makes life bearable. It is easier and pleasanter and more heartening to believe than to doubt. It is the most natural thing in the world for human beings to accept the assurances of advertisers that promised benefits are the real thing.

DECENT ADVERTISING GETS RESULTS

There is a mountain of evidence that decent, honorable advertising is capable of building fabulously successful businesses.

I do not believe that anybody associated with the advertising of Campbell's Soups thinks that the customer, as *Fortune* asserts, is simple-minded. Campbell's copy is everything that proper copy should be; it is packed with useful information, its claims for the product are moderate, it is always in impeccable good taste. Gimmicks and dishonest, exaggerated clamor has played no part in making Campbell's Soups the top-seller in its field.

Speaking of top-sellers, look at the advertising of Swift's Premium Ham for a model of decency, dignity, and decorum. Or at the clean, attractive, scrupulously honest advertising of Miracle Whip salad dressing. In the Kraft organization, I am sure, there is no basic theorem that the customer is simple-minded.

Once again I want to proclaim my belief in advertising aimed at the intelligence of the customer. He may do many foolish things, he may be sadly uninformed on many subjects, but he isn't the chump that research often makes him out to be. His gullibility, his willingness to believe, is an asset to advertising—provided its cynical abuse doesn't sink the ship.

G.E. Leadbetter Forms Manufacturers Corp.

MANSFIELD, Ohio—G. E. Leadbetter, president, has announced the formation of the Manufacturers Corp. of Ohio, with headquarters here, to furnish plastic pipe and fittings to distributors in the plumbing and heating, mill supply, electrical, hardware, plant equipment, oil, and building supply fields.

Leadbetter said the new company already is nationally represented by 16 groups of factory representatives, having 51 field men. Warehouse facilities will be offered at principal points throughout the country.

Leadbetter was formerly connected with Barnes Mfg. Co., as manager of contract sales. William R. Hite is vice president of the company. He was previously vice president of Johnston Water System Co. of Mansfield.

Shippers of Perishables Seen Shifting From Railroads to Refrigerated Trucks

WASHINGTON, D. C.—Shippers of perishable commodities requiring refrigeration are diverting more of their shipments from railroads to trucks, according to a study by the U. S. Department of Agriculture.

The investigation shows that the total number of carloads originated in railroad refrigerator cars has been declining moderately in recent years, "probably reflecting, in part, the effects of diversion of perishable traffic to trucks." Heavier average loadings per car are also a factor, however.

The demand for railroad refrigerator cars comes almost entirely from shippers of agricultural products, with roughly half the carloads consisting of fruits and vegetables, and the rest of meats, poultry, dairy products, and miscellaneous farm items.

DECLINES LISTED BY YEARS

All commodities shipped in railroad refrigerator cars, except lettuce and cured meats, have shown substantial declines between 1947 and 1950. For instance, 47,000 cars of apples were loaded in 1947, and 34,000 cars in 1950, a decline of 13,000 cars. Loadings of citrus fruits in 1947 were 147,000 cars, compared with 79,000 cars in 1950, a decline of 68,000 cars. Potato loadings in 1947 were 264,000 cars, against 221,000 in 1950, a reduction of 43,000 cars. Fresh meat carloadings fell to 258,000 cars in 1950 from the 300,000 cars loaded in 1947, and shipments of other animal products were down to 58,000 cars in 1950 compared with 110,000 cars in 1947.

Concerning diversion from rail to truck, the study indicates a substantial shift in favor of the truckers on movement of selected fresh fruits and vegetables from leading sources of supply into 10 large markets between 1948 and 1950.

TABLE SHOWS PERCENTAGES OF PRINCIPAL CROPS

A table prepared by the Agriculture Department's Bureau of Agricultural Economics shows the following percentages of principal crops diverted from rail to truck in 1950, compared with 1948: Oranges, 21%; grapefruit, 28%; apples, 5%; potatoes, 15%; lettuce, 0%; tomatoes, 8%; cabbage, 9%; and celery, 5%.

The total diversion is estimated at about 10% on the average. Diversion is measured by the differences between actual unloads by rail in 1950 and the unloads that would have moved by railroad if that carrier had precisely the same relative share of the volume from each point of origin to each destination as it did in 1948.

Commenting on the trend toward diversion, the department said:

"Specific measurements of diversion of selected fruits and vegetables at 10 large markets confirm the general conclusion concerning one of the causes for the downward trend of refrigerator carloadings. The diversion of potatoes was the largest in actual volume for any of the fruits and vegetables. The railroads would have had almost 5,000 more carloads of potatoes in 1950 if there had been no diversion since 1948. No diversion was reported for lettuce, but the geographic factors are unique for that crop. By 1948, trucks were used almost exclusively for short hauls."

"The only remaining possibility for large-scale diversion to the 10 markets was from California and Arizona to St. Louis and points east. "The look twice—It's worth the price!"

Such long hauls have not yet become attractive to trucks, except under exceptional circumstances."

Despite the long-term trend away from rail movement of perishables, there is still a shortage of railroad refrigerator cars in periods of peak demand. The supply situation has improved since last March, when the carriers reported a shortage of more than 2,000 cars daily. That was the most severe shortage reported at any time in the period for which comparable reports are available.

The daily average surplus reached a peak this year of nearly 6,800 cars at the end of April, but by the first week in August had dwindled to a narrow margin of about 800 cars daily. Localized shortages of refrigerator cars may develop even when there is no over-all lack of cars.

Virtually all the demand for refrigerator cars comes from shippers of agricultural products, including not only fresh and frozen fruits and vegetables, but also canned goods. In fact, only slightly more than 5% of all carloads which originated in refrigerator cars during the last three years were not agricultural products, according to the Agriculture Department study.

GETS IDEAS—USES THEM



GENIAL "GENE" DAVIS

One of Toledo's most successful and widely known dealers in refrigerators, television, and household appliances, Genial "Gene" Davis says:

"I have been a regular reader of AIR CONDITIONING & REFRIGERATION NEWS for the past seven or eight years. As a dealer in household refrigerators and other appliances, the NEWS keeps me abreast of the times and brings me a lot of good ideas that I can use . . . and do!"

"The news from Washington every week is mighty helpful . . . it's a service every dealer should use."

"I especially enjoy the 'INSIDE DOPPEL' column and consider this feature alone well worth the subscription price."

"I really look forward to the arrival of the NEWS each week . . . and so do the boys who work for me, I mean salesmen and servicemen."

Genial "Gene" Davis is long-established in Toledo, Ohio, with a 3-room store and big service department at 1314 Dorr St. Recognized as a good merchandiser, he is an aggressive advertiser featuring in all his ads: "Over 25 years of continuing satisfying service!"

"Look twice—It's worth the price!"

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Model "500"

Temperature Recorder with capillary tubing for EYE-LEVEL reading. Priced from \$42.50.

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There's always one that's better...and in controls its Ranco!



Ranco Inc.
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WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS



Current Literature Available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Pocket-Sized Manual Is Guide to Silver Brazing

KEY NO. N-120

NEWARK, N. J.—The Research Div. of the American Platinum Works has compiled and edited a complete library on low temperature silver brazing into a 48-page pocket-size manual.

The booklet is claimed to be the most complete guide available on all aspects of silver brazing applications and procedures.

More than 50 drawings and charts are used to illustrate the text. The booklet provides correct answers to general questions on low temperature brazing, brazing alloys, joint design, preferred brazing shapes, pyramids, fluxing, heating methods, cleaning, and inspection.

The reference charts give specifications for silver brazing alloys, U. S. government specifications, conversion data, and brazing alloy quantities by weight. A specially designed graph calculates the thermal expansion of metals and various silver brazing temperatures.

L-O-F Tells of New Products Made by Fiber Glass Div.

KEY NO. N-121

TOLEDO—A pamphlet describing the yarn and glass fiber products to be manufactured in the new fiber glass division of the Libbey-Owens-Ford Glass Co. in Parkersburg, W. Va. has been issued by the company. The pamphlet lists specifications on 18 different yarns marketed in seven forms and 22 superfine glass fiber products.

All-State Booklet Describes Touch-Up Pencil for Tinning

KEY NO. N-122

WHITE PLAINS, N. Y.—A folder issued by All-State Welding Alloys Co., Inc. here describes a "quick, easy" way to tin hard-to-tin surfaces, rustproof metal, and galvanizing spots where damage has destroyed original surface.

Key is All-State's "Kromover" touch-up pencil, according to the company.

Marsh Bulletin Covers Electromatic Solenoids

KEY NO. N-123

SKOKIE, Ill.—Detailed specifications covering a line of solenoid valves, both direct acting and pilot operated, are described in a four-page bulletin No. 77, according to the Electromatic Co., sales affiliate of Jas P. Marsh Corp.

Dimensional drawings and capacity charts are shown for each type along with detailed instructions as to proper installation and servicing.

The valves described are of a new type of construction with bodies machined from solid brass bar stock. All are Underwriters' approved and rated and available in a wide range.

Jet Pump Operation, Data Published by Penberthy

KEY NO. N-124

DETROIT—A new catalog of Penberthy jet pumps, including ejectors, eductors, exhausters, and syphons, has been published by the Penberthy Injector Co. here.

Called Bulletin 512, the catalog explains the principle of jet pump operation and then gives engineering data and specifications on the various types of jet pumps.

Included are pumps for use in air conditioners to remove condensate.

Wabash Catalog Shows Drier, Strainer for Hermetics

KEY NO. N-125

CHICAGO—Wabash Mfg. Co. has announced publication of its catalog No. 521 showing for the first time the Wabash line of "Strainer Cap-Tube" and "Dryer Cap Tube" combination designed specifically for household hermetic units.

Another new entry in the catalog is the Wabash line of spun driers, strainers, and accumulators with soldered connections. The firm's regular lines of driers, strainers, capillary tubes, oil separators, speed couplers, and cylinders are also listed in the catalog.

Stevens Illustrates Line Of Protected Thermostats

KEY NO. N-126

MANSFIELD, Ohio—Stevens Mfg. Co., Inc., manufacturer of thermostats for appliances, communications, and electronic equipment, announces an illustrated bulletin on the new Stevens Neoprene-protected bimetal thermostats.

Hermetically-sealed MH disc type and CH strip type units are described in addition to suggested applications.

The bulletin illustrates the operating principles and shows in detail dimensional drawings of the styles available for use where contamination is a problem.

Ratings and construction data are catalogued for both types of thermostats.

Copies of Bulletin L-4609 are available on request.

Case Histories Describe Servicing with Amprobe

KEY NO. N-127

NEW YORK CITY—Case histories of electricians, maintenance men, servicemen, engineers, and production and test personnel, who do their servicing with the aid of an "Amprobe Snap-around" volt ammeter, have been gathered into a 16-page manual by Pyramid Instrument Corp. here.

Entitled "Servicing with the Amprobe," the pamphlet now is available to the industry on request.

The 11 case histories in the booklet (No. 504) illustrate as many different uses of the alternating current ammeter and voltmeter, a pocket-size instrument. The effect is heightened by cartoons drawn to illustrate each experience.

In addition, there is a working drawing of the Amprobe with its specifications and mechanical dimensions on the inside front cover. The book concludes with a listing of uses, which in effect summarize the actual experiences, and also instructions for reading the Amprobe.

Duraluminum Co. Issues Folder on Ladder Safety

KEY NO. N-128

NEW YORK CITY—Duraluminum Mfg. Co. has issued a folder illustrating the improved safety features of its new straight and extension ladders.

Details of rung construction, side-rails, safety locks, and safety shoes are shown and explained by the company.

SLANTS on Service**Date of Installation on Appliance Shows Warranty**

A serviceman can make an immediate check on the warranty status of an appliance if the date is marked on the back on the day it was installed. A grease pencil would probably be best to use.

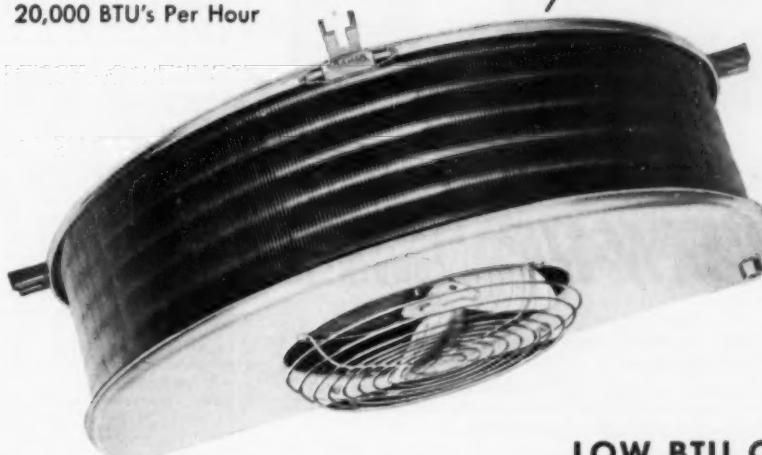
Remove Plug When Winter Cover Goes on Window Unit

The plastic all-weather covers that have been introduced to protect the exterior of window air conditioners which project beyond the window also help keep the unit clean and prevent drafts.

A window unit, however, should never be run while such a protective cover is still in place, for the assembly may be damaged. It is suggested that when a cover is installed, the plug from the unit be pulled out of the electrical outlet and a warning tag attached so that the user won't try to operate the conditioner with the cover in place.

Small File Helps Crimp Molding Channel

Refrigerator molding channels can be crimped into place easily with a small file. Insert the tail end of the file in the holes. Moving the file from side to side will crimp the channel tightly.

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Provides adequate head room.

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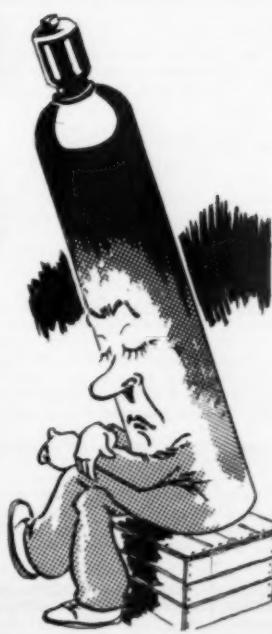
KRAMER TRENTON CO. • Trenton 5, N.J.**WANTED FOR DESERTION REWARD FOR RETURN**

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WRITE FOR
BULLETIN C-192

Refrigeration Problems and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

A Freezer-Room Problem (2)

Last week Spud Murphy was telling Mike Labotnik about a freezer room that he had put in for his customer Jenkins. He had insulated a concrete room in the basement that had formerly been used as a fruit cellar. After the 3 in. of insulation were in, the internal dimensions were roughly 8 ft. long, 4 ft. wide, and a little less than 6 ft. high.

In this room he had put five 22 in. by 84 in. plates mounted horizontally in a shelf rack. He fed these with a thermostatic expansion valve with an 042" orifice. To these he connected a 1 hp low temperature "Freon-12" condensing unit located in the adjacent basement.

The temperature in the freezer room had been holding at about zero and the customer was satisfied, but Spud was not quite satisfied. The expansion valve was acting erratically and the machine was operating almost one half the time which was more than Spud thought it should in cold weather. Discharge pressure

was low since the basement was cool and the suction pressure was averaging 9 or 10 in. of vacuum.

Spud had changed the drier a time or two and was about to change it again, also change the TX valve. He had asked Mike if he could tell him what was wrong.

VALVE ADJUSTED PROPERLY

"Spud," answered Mike, "I doubt very much if changing the valve and drier will do any good at all, for you have another condition that is undoubtedly responsible for most if not all of your trouble."

"First though, I want to ask you a couple of questions. You said that the valve acted erratically. What made you think so?"

"Well," replied Spud, "the compound gauge shows the valve sort of sticking. The suction pressure will go down to 10 in. and then back up to 4 or 5 in. and the frost will flash out on the suction line and then off. It won't settle down to an even pressure."

"So you think the valve is open as wide as you can get it? Where is the bulb attached?"

"First I had it between the last plate and the heat exchanger. Then

I tried it on the suction line after the heat exchanger, but still inside the room, of course. But I put it back where it was at first for I got too much frost out on the suction line. It's now between the plates and the heat exchanger."

"O.K.," said Mike. " Didn't you say that the machine was only 10 or 15 ft. away, that is, you only have a 10 or 15-ft. suction line? What size tubing is the suction line?"

WHAT PRESSURE DROP?

"Well, I used 5/8 in. o.d.," answered Spud. "I thought of using three quarter, but it was such a short run. I figured five eighths was big enough. Do you think I should have used three quarters?"

"Five eighths is pretty small, and it would probably have been better to use three quarter. But I don't think that the pressure drop due to the five-eighths suction is the main cause of your trouble."

"However, I am pretty sure that a lot of your trouble is due to pressure drop, but in the plates. You have five big plates in series, with the circuit through each plate running probably 75 or 80 ft. of about five-eighths tubing or its equivalent, making a total of maybe 375 to 400 linear feet of tubing."

"I'd guess that you have a pressure drop through those plates of as much as 7 or 8 lbs. which is, of course, way too much. On a low temperature job like that, I like to keep the pressure drop under a pound and I wouldn't settle for over a pound and a half."

"Why, Mike," replied Spud, "that means that with a pressure drop of a pound or less, the suction pressure would be running maybe 1 or 2 lbs. gauge. That's about what I figured the suction pressure would be when I picked out the plates and the machine."

"But what can I do about it? I've sure got to use that much plate surface. If I take out one plate, that would cut down on the pressure drop, but do you think I'd have enough plate surface?"

"Oh, no, Spud," advised Mike. "You need all five of those plates. Besides, taking out one plate, although it would reduce the pressure drop through the plates, would put your plate surface and capacity out of balance with the machine capacity. Doing that, you would wind up with a lower suction pressure than you now have. No, that's not the way to do it."

"It would sure be fine if I could get the suction pressure up to a couple of pounds or so," said Spud. "That should raise the machine capacity a lot by raising the suction pressure from 8 to 10 in. of vacuum to say a pound or so."

"It sure would," said Mike. "Ten inches of vacuum corresponds to a temperature of about -39° F. The capacity of the machine at a -39° F. evaporator temperature is probably not over 2,700 or 2,800 B.t.u. per hour. One pound gauge corresponds to about a -19° F. evaporator temperature, and the machine should then have a capacity of about 4,200 or 4,300 B.t.u. per hour, an increase of over one half of the capacity."

"That should cut the running time down to about one third of the time during this weather. Next summer, it will run more of course, and the customer will probably be freezing more foods then too; but it sounds as if the machine and plates both have enough capacity."

HOW TO REDUCE THE PRESSURE DROP?

"That's a swell dream," said Spud, "but how am I going to get that pressure drop down enough to do all that?"

"It's really simple, Spud. Divide the plates into two circuits and put an expansion valve on each circuit. How are you feeding the plates now, down or up?"

"The valve now feeds into the bottom plate and the suction line comes off the top plate," replied Spud.

"Okay," said Mike. "That is an

042 valve. Leave it where it is and feed the three bottom plates with it. Cut the line between the second and third plates from the top, and run a branch suction line from the middle plate."

"Then put another valve on the two top plates. Feed into the second plate and use the same suction line from the top plate that you now have. I think, too, that an 035 valve is big enough for the two top plates."

"You can use the same heat exchanger in the main suction line after the tee connecting the two branch suction lines. Attach the bulb on the branch suction lines of course, and far enough from the tee that one valve won't affect the other."

"That should help a lot," Spud answered. "By making it into two circuits, it should cut the pressure drop in half also, huh? That would make the suction pressure 2 or 3 in. of vacuum, which is a lot better than 9 or 10 in."

"It will do a lot better than that," corrected Mike. "Making two circuits instead of one, will more than cut the pressure drop in half. I imagine that it won't be much, if any, over 1 lb., so the suction pressure should average about zero gauge or a plate temperature of -18° or -20° F., in order to give you a freezer room temperature of about 0° F. There will probably be a temperature difference of about 20° between the plates and the room."

PRESSURE DROP WIDENS SUPERHEAT

"You see, that excessive pressure drop you have now is not only cutting the machine capacity but it is affecting the TX valve by widening its superheat. Instead of a superheat of 8° or 10° that the valve is capable of maintaining, the superheat is probably running 18° or 20°. This means that a good big part of that top plate is being used to superheat the gas, and it is not doing as much refrigerating as it should nor as much as it would if it were more fully active."

LONG CIRCUIT CAUSES VALVE TO HUNT

"Having the five plates in series the way they are now not only causes a high pressure drop, but that long circuit of 375 or 400 ft. makes the TX valve 'hunt.' It takes time for the 'Freon' to travel that long coil, so when the valve opens, it takes the liquid a long time to get to the bulb and cause the bulb to close the valve."

"Then when the liquid finally reaches the bulb and the bulb closes the valve, it keeps the valve closed so long that the coil is almost pumped dry before the bulb opens the valve again. While the valve is open, the suction pressure goes up, and when the valve is closed, the suction pressure goes down."

"We say the valve is hunting and it is hard on the capacity of the plates, for a lot of the time they are not very active. Of course, the valve doesn't close fully and then open wide. But it doesn't feed steadily either, as it should to keep the plates constantly active."

"I think you will find that using two valves will not only raise the suction pressure and help the machine capacity, but should reduce the erratic action of the valves, which was probably due mostly to the valve hunting."

"With the two circuits, the pressure drop will be reduced and the valves can operate at a normal superheat of around 10°. Also the two circuits will cut the long travel time of the refrigerant between the valve and the bulb, and allow the bulb to react more quickly, and reduce the hunting."

"Too long a circuit is often the cause of excessive pressure drop, but even if there were not the excessive pressure drop, the too-long circuit causes valve hunting. The excessive pressure drop causes the valve to feed less, due to the wide superheat, and it contributes to the hunting."

THE VALVE WITH EXTERNAL EQUALIZER

"Mike," asked Spud, "how would it be to change to a TX valve with external equalizer and just use the one valve instead of two?"

"The external equalizer helps the valve by enabling it to operate at a normal superheat in spite of the high pressure drop, but it doesn't help the machine much. By helping the valve feed the plates better, you might get a little increase in suction

pressure, but not much compared to the loss due to pressure drop. The pressure drop is still there and the machine still has to operate on the low suction pressure and of course this cuts its capacity."

"By enabling the valve to operate on a low superheat, the external equalizer may reduce the hunting some, but it cannot cure the hunting that results from the long circuit."

"External equalizers are helpful on some jobs. If distributors are used, the external equalizer is a must. It isn't a cure-all, and there isn't anything that beats actually doing away with the cause of the trouble."

"Plates are swell for a lot of low temperature jobs, but you sure have to be careful with the big plates especially. I've seen just a lot of jobs using plates that were operating very poorly, just because someone didn't realize what high pressure drops they had and what it was doing to the jobs."

HOW TO AVOID EXCESSIVE PRESSURE DROP

"One manufacturer says to use no more than 75 sq. ft. of plate surface on one circuit. Myself, I think that is too high; I wouldn't go that much."

"Another rule is on the basis of the total length of the tubes, or passes in the plates, and gives 250 linear feet as the maximum for one circuit. Again, I think that is too much."

"The best way is to put a tee in between the expansion valve outlet and the first plate, and put a compound gauge in this tee. Then you can see for yourself what the pressure drop is between that gauge and the one on the suction service valve on the machine."

"If it is a long suction line from the plates to the machine, it pays to put another tee and gauge at the outlet of the plates, so you can tell whether to blame the pressure drop on the evaporator or on the suction line, and how much there is in each."

"The tees can be left in the installation, but the gauges can be removed and the tees plugged. Those tees have been the means of surprising a lot of fellows who didn't think they had much pressure drop. That's true not only on plate jobs, but on a lot of other jobs, such as, for example, home-made wrap-around coils for chest freezers and for beer and water coolers."

"You said you didn't like to have more than 1 lb. pressure drop on a low temperature job. How about a higher temperature job?" asked Spud.

"Pressure drop is not good on any job, but it isn't as bad on the higher temperature ones. I don't like to see more than a 2-lb. pressure drop on any job. Pressure drop robs the machine, the valve, and the evaporator, and increases operating cost."

"Here, take this .035 valve instead of that .042."

"Oh, yes, thanks Mike. Have you got any five eighths reducing tees? I think I'll put in one before I change to two circuits, just to see what the pressure is now. Then I'm going to put in a tee after the other valve too, when I split the plates into two circuits. I may find that I'll have to change to a three-quarter suction line."

"Okay, here are a couple," replied Mike. "There goes the phone. Let me know how you make out, will you?"

"I sure will, and thanks a lot. I think I can now fix the Jenkins job up to satisfy me."

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Must be mature, alert, personable. Technical know-how and sales approach essential. Should have supervisory potential and good facility of expression.

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Appliance Makers Introduce Full Lines--

(Concluded from Page 1, Column 5) will have "revolutionary" convenience and operating features.

Here's a rundown on some of the other prime new products introduced at the Chicago showings, not covered elsewhere in this or previous issues:

A new dehumidifier, to retail at \$123.50, was introduced by Victor Products Corp., a leading manufacturer of home freezers. Victor's home freezer line for 1952 includes 8, 10, 14, 19, 24, and 30-cu. ft. models.

A new "Quicfreez" upright home freezer of 4-cu. ft. capacity which will retail for less than \$200 was introduced by Sanitary Refrigerator Co., and was one of the "most looked-at" items to be introduced at the winter markets.

Standing 24 in. wide, 28 in. deep, and 38½ in. high, this model provides 7 sq. ft. of frozen food storage space. Shelves are removable, so that both small and bulky packages can be stored efficiently.

Design features of this unit include a special baffle door at the bottom of the freezer, to prevent spilling out of cold air when the freezer door is opened. The baffle door can also be lowered so that it serves as a shelf. A "frigid wall" construction eliminates plates and coils in the freezer space.

A new vacuum cleaner, the Universal "Jet 99" to retail at \$99.95, was introduced by Landers, Frary &

Clark. It will feature extra suction power, easy and fast dirt disposal, a removable cord, and ease of handling.

The Jet 99 cleaner is marked by an unusual shape, somewhat rectangular and looking a little like an electric roaster. The two-piece all-metal case is 12½ in. high, 10½ in. wide, and 18 in. long. It weighs 18 lbs.

It gets its name from the "jet power" which is supplied by a 1-hp. motor, providing suction power equivalent to a water lift of 60 to 65 lbs. In operation the unit draws air through the nozzle and hose into the upper front end of the cleaner, where it drops into a throwaway bag.

Several new range models marked new lines introduced by A. J. Lindemann & Hoverson Co. Included among them were a 30-in. model, and a "builder's model" incorporating a separate oven for wall installation.

Among the new items introduced by the Apex Electrical Mfg. Co. were a new Roll-A-Way dishwasher, with a built-in 4-gal. water heater tank and universal inlet hose eliminating need for permanent installation; a new canister-type vacuum cleaner with motor in the bottom and easily-removable dust bag; and the 1952 Apex automatic washer with spiral-tub agitator principle with 27-min. washing cycle in newly-designed cabinet, priced at \$319.95 and \$329.95.

Chicago Midwinter Market Notes

Perfection Stove Co. of Cleveland, which hasn't been in the refrigeration business since abandoning its kerosene-operated farm refrigerator, appeared at the American Home Furnishing Market in Chicago with three electric refrigerator models.

These household refrigerators, it is understood, are being manufactured for Perfection Stove by Artkraft in Lima, Ohio.

Vornado's long-heralded room air conditioners were introduced by the O. A. Sutton Corp. "Color blending to fit any room" was the promotional gimmick which attracted most attention.

Every day a lucky visitor to the Westinghouse display at the Furniture Mart was awarded a "Frost Free" Westinghouse refrigerator, but several visitors—who were excluded forcibly from contention—vowed to get even, somehow, some way, some time.

An alarm bell rang each 60th time the door to the Westinghouse showroom opened, and the visitor who "rang the bell" became eligible for the big prize—presumably. By edict of the "high brass," representatives of competitor manufacturers were declared ineligible.

To an executive committee meeting of the American Gas Association, President George Mitchell predicted that 1952 would be a banner year for their industry.

Although 1951 sales of gas ranges, water heaters, and refrigerators didn't equal those of 1950, they were more than satisfactory, Mr. Mitchell declared.

John J. Reinecke, formerly of the

Wood Office Furniture Institute, was appointed executive secretary of the American Home Laundry Manufacturers Association at a meeting in Chicago Jan. 7.

Fred Mitchell of Frigidaire is the new president.

Guest speaker at this meeting was Harry J. Holbrook, director of the consumer goods division, National Production Authority, Washington, D. C.

The normally ebullient Holbrook (sent to the government by Norge for "the emergency") was pessimistic about supplies of copper, nickel, and aluminum for 1952.

"As our defense goals are reached one by one," he encouraged, "material shortages will be eased for those consumer durables which the public recognizes as most essential."

Production Cut--

(Concluded from Page 1, Column 5)

2. Wilson declared that the outlook for relief from materials shortages for civilian production later this year is not as good as it had been. He said that "the severest pinch" in critical materials will be felt this year and may continue into 1953. The defense production program may run well into 1955, he indicated.

3. The Small Defense Plants Administration has announced the creation of an Office of Materials designed to help small businesses suffering hardships because of government materials allocations. Telford Taylor, head of the SDPA, said that unless some small firms get increased allotments of critical materials they may be forced out of business.

How Installers Get Parts Priorities--

(Concluded from Page 1, Column 5) shall not be considered installation for the purposes of this regulation. No installation shall be subdivided for the purpose of bringing it or any part of it within this definition."

The regulation defines repair parts and materials as any item which a repairman (or installation man) stocks and uses for repair or installation work. It does not include a complete item which is ordinarily usable as a unit.

Thus, a repairman can use his rating to get a television aerial but not a television receiver. Or he may get a furnace grate, but not a furnace.

Neither "maintenance" nor "repair," the regulation says, includes the replacement of a building, appliance, machine, or piece of equipment; nor does it include the improvement of any building, appliance, machine, or piece of equipment by replacing parts or materials which are in sound working condition with parts or materials of a new or different kind, quality, or design.

Under terms of the regulation, a repairman can use a DO-RE rating to get installation and repair materials not covered by CMP except for the materials included in the following schedule:

Any basic chemical; nylon fibers and yarns; paint, lacquer, and varnish; paper and paper products; paperboard and paperboard products; and materials listed in List A of NPA Regulation 2 for which no DO rating is valid.

Among CMP products, repairmen can use their rating to get no more than 20 tons of carbon, alloy, or

stainless steel (including not more than three tons of alloy steel and one ton of stainless steel) and 500 lbs. each of copper and aluminum per quarter. On copper wire mill products, they can get only \$150 worth or 20% of their use of these products during the calendar year 1950, whichever was greater.

A person, who in the year immediately preceding July 31, 1951, operated more than one repair or installation establishment, may treat each such establishment as a separate entity for purposes of the regulation.

The record keeping requirements of the regulation were extended from two to three years. This section now reads as follows:

"Each person participating in any transaction covered by this regulation shall make and preserve for at least three years thereafter, accurate and complete records of receipts, deliveries, inventories, production, and use, in sufficient detail to permit the determination, after audit, whether each transaction complies with the provisions of this regulation.

"Records may be retained in the form of microfilm or other photographic copies instead of the original by those persons who, at the time such microfilm or other photographic records are made, maintain such copies of records in the regular and usual course of business.

"All records required by this regulation shall be made available for inspection and audit by duly authorized representatives of the National Production Authority, at the usual place of business where maintained."

Punishment provisions were ex-

tended to cover not only those who wilfully violate the regulation and those who wilfully furnish false information, but also those who conceal any material fact in the course of operation under the regulation. Such persons can be punished by fine or imprisonment or both.

Some Ceilings Postponed--

(Concluded from Page 1, Column 5) continue to use their ceiling prices established under the General Ceiling Price Regulation (GCPR) until Feb. 20, 1952.

Some manufacturers covered by CPR 30 are required to determine base period prices for certain new commodities because they had no base period determining method.

Other manufacturers are required to apply Section 43a for ceiling prices or price determining methods because they started in business after Jan. 1, 1950, and are therefore unable to compute a labor cost adjustment factor as provided by the regulation.

In both cases, these manufacturers must apply to OPS for determination of ceilings and the application must be approved by OPS before the ceilings may be used. However, ceilings will be deemed approved if OPS has taken no action within 30 days.

Some of these manufacturers have not been able to complete the necessary filing of applications by Dec. 19, 1951, the mandatory effective date of CPR 30, and, therefore, do not have a ceiling price for each of their commodities involved.

These manufacturers may continue to use their established GCPR ceilings for such commodities until Feb. 20, 1952.

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Dairy cases
Meat cases
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Open Milk Cases—
Self-Cut
Self-Defrosting—
Freezers

DELICATESSEN CASES

porcelain in and out
54 inches high—3 shelves

REACH-IN BOXES

all sizes—
remote & self contained
Porcelain in and out
Stainless in and out
Stainless front—alum ends

FULL VISION FREEZER CASES

54 inches high Freezer cases
porcelain in and out

MANY GOOD FRANCHISES
ARE STILL OPEN. PIN THIS
'AD' TO YOUR LETTERHEAD
AND MAIL FOR COMPLETE INFORMATION.

BUTCHER CASES

porcelain in and out
Double Duty cases
Single Duty cases
34 inches wide and
40 inches wide

FULL VISION CASES

porcelain in and out
54" high cases
41" high Full Vision Lowboy
41" high Double Duty Lowboy
porcelain or formica tops

REACH-IN FREEZERS

Upright Reach-In Freezers
self-contained—
all sizes—
porcelain in and out
stainless in and out
stainless front—alum ends

WALL BOXES

porcelain in and out
Dairy wall boxes
Beverage wall boxes
Dairy wall boxes—self-cont.

EXECUTIVE SALES OFFICE . . .

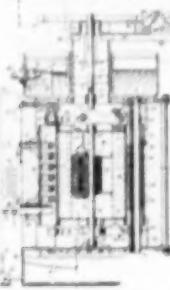
223 Flatbush Avenue
Brooklyn 17, New York
Phone Ulster 7-8662

Pinnacle
EQUIPMENT CORPORATION
FLEETWOOD, PENNSYLVANIA

PATENTS

Week of October 23

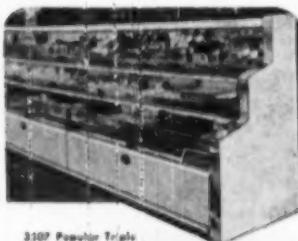
5,573,525. MACHINE AND METHOD OF MAKING ICE ON THE LINE. Crosby Field, Brooklyn, N. Y., assignor to Finance Corp., Brooklyn, N. Y., a corporation of Delaware. Application April 5, 1948, Serial No. 500,730. 10 Claims. (Cl. 68-106.)



1. In ice-making apparatus, the combination of a plurality of freezing tubes, each having an inner surface upon which ice may be formed, refrigerating means including an evaporator assembly to subject the freezing tubes to a cooling effect from their outer surfaces, means to supply liquid to be frozen to the interior of said tubes, and heating means to cause an electric current of high value to flow through the tube walls and thereby free the ice; said heating means including a distributor arm pivotally mounted to swing about a fixed axis and separate means electrically connected to each of said tubes and having a contact face which is engaged by said arm to complete an electric circuit through the tube.

5,573,526. REVERSIBLE HEATING AND COOLING SYSTEM. Frank A. Krueger, Shawano, Wis. Application May 5, 1948, Serial No. 50,881. 10 Claims. (Cl. 68-109.)

1. A reversible heat exchange system comprising a pair of heat exchangers having approximately equal volumetric capacity, a tube having a restricted passageway therein connecting the lower portions of said heat exchangers to each other, an accumulator connected to the



3107 Popular Triple

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cient performance.
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Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will insure timely delivery of your bid set. Your bid set of invitation specifications are normally not included in a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

DEPARTMENT OF DEFENSE

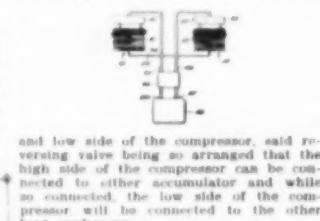
It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Office: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Watertown Arsenal; Watervliet Arsenal; Springfield Armory. Requests for proposals or quotations will be indicated in the column by the letter "Q." If numbered, the number will be followed by the letter "Q."

Description **Quantity** **Invitation** **Opening**
No. Date

Officer in Charge, Navy Purchasing Office, Washington, D. C. Indicator thermometer specs. 1142 8714-A II Feb 53

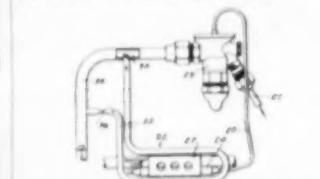
Wright-Patterson Air Force Base, Base Procurement Office, EWB Building 36, Dayton 1, Ohio. Invitation for Bid B and Requests for Proposal Q are distributed to firms listed in the Bidders List maintained by the

top of each heat exchanger, a duct connecting each accumulator to a reversing valve assembly, a compressor, and ducts connecting the valve assembly to the high



and low side of the compressor, said reversing valve being so arranged that the high side of the compressor can be connected to either accumulator and while so connected, the low side of the compressor will be connected to the other heat exchanger.

5,573,561. REFRIGERANT CONTROL SYSTEM. Harold J. Matteson, Glendale, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California. Application April 9, 1948, Serial No. 19,935. 12 Claims. (Cl. 68-8.)



1. In a refrigerating system, a cooling unit comprising a coil, means for passing refrigerant through said coil; a thermostatic expansion valve for controlling passage of said refrigerant, and comprising means responsive to the temperature at the outlet end of said coil for controlling the operation of the valve, means constituting a pipe connecting the outlet of said valve to the inlet of said coil, and means comprising a tube connected at both of its ends to said pipe for conducting refrigerant passing into said pipe from said valve, in thermal-transfer relation to said temperature responsive means in an amount only sufficient to compensate for heat leakage therethread.

5,573,566. ICE MAKER AND BOTTLE COOLER. Glenn Muffy, Springfield, Ohio. Original application March 18, 1948, Serial No. 304,460. Divided and this application Dec. 31, 1948, Serial No. 549,132. 6 Claims. (Cl. 68-8.)

1. A refrigerator designed for cooling bottled goods, a support for said bottled goods on which bottles may be set in

above activity. A complete bid set is available for EXAMINATION ONLY by prospective bidders at the Air Regional Office. Located in the local trading area of the above activity. For modifying gages, various

thread snap 3188-Q 22 Jan 52

Cold chamber, non-magnetic, 1 cu. ft. 3188-Q 21 Jan 52

10" x 10" x 14" dept. materials 3259-Q

coated metal having a permeability

of less than 1.5 precision

temperature gauges installed

GENERAL SERVICES ADMINISTRATION

Description **Quantity** **Reference** **App. Bid**
No. **Date**

General Services Administration, Seattle, Washington
Tubing, seamless, 20 ft. Medium C-M-6127-1 1-16-52

Business Service Center, Region 3, General Services
Administration, Washington 25, D. C.

Air conditioning filters 300 cu. in. 4J-6389-R 1-29-52

U. S. DEPARTMENT OF COMMERCE

U. S. Weather Bureau, Washington 25, D. C. Attention Chief:
Material Section
Refrigeration chamber, low temperature, in
accordance with U. S. Weather Bureau Specifications

Procurement Section, National Bureau of Standards
Connecticut Ave. and Van Ness St. NW, Washington 25, D. C.
Recording potentiometer for 1 cu. in. B-1-1936-52 1-21-52
couple similar to Minneapolis Honeywell Specs No. 187

CONTRACTS AWARDED AS OF JAN. 5, 1952

Description—Contractor and Address

Ships Parts Control Center, Naval Supply Depot,
Mechanicsburg, Pa.
Repair parts for refrigeration equipment—3050. \$28,588.—Frick
Co., 230 Broadway, Waynesboro, Pa.
Repair parts for heat transfer equipment—7344. \$39,355.—Diamond
Power Specialty Corp., Lancaster, Ohio.
Repair parts for refrigeration equipment—3312. \$36,686.—Alico
Valve Co., 865 Kingsland Ave., St. Louis, Mo.

Last of Miller Stores Gets Air Conditioning

HARRISBURG, Pa. — When the Sunbury store of the Miller furniture chain with headquarters here has its cooling installation completed—scheduled for Jan. 15—, every one of the six Miller stores will be air conditioned.

The main store here has been air conditioned for 13 years. Miller's Hagerstown and Waynesboro stores were air conditioned last year. The Chambersburg and Carlisle stores were equipped with cooling systems earlier.

Now!

"Stories of
the Week"

In Handy
Form

In response to hundreds of requests from AIR CONDITIONING & REFRIGERATION NEWS subscribers, the conductor of its "Inside Dope" column has collected and grouped his best "Stories of the Week." They are now available in convenient book-form for your reading and working pleasure. The book is entitled: "You'll Love This One."

Everyone will enjoy reading this book, we hope, but for the salesman—and for anyone who may be called upon to "say a few words" at a meeting—it should have special appeal.

Here's why: this book of good stories you can tell is printed on thin paper, bound in flexible leatherette, and designed to fit neatly into your inside coat pocket.

While waiting in an ante-room to see Mr. Bigdome, the sales representative can thumb through it and pick out four or five pertinent jokes which are guaranteed to put his prospect in a good mood.

The man about to make a speech—or one who figures he may be asked to rise and shine extemporaneously—can consult it surreptitiously while the toastmaster is doing his stuff. Although it's jam-packed with grand tales, it isn't bulky. Rather, it's unobtrusive. Looks more like a leather wallet than a book.

You can be the life of the party if you've memorized some of the anecdotes in this book. Everybody loves a good story well told—and all the jokes in this book have been tested on tough audiences, both large and intimate, by the author.

Within its 236 thin-paper pages more than 200 sure-fire laughs are presented. You can use it profitably, and so can your friends. It's handsomely turned out, and will make an appreciated gift anytime.

PRICE: \$1.50

(Write for quantity discounts on 5 or more copies.)

Order directly from: Business News Publishing Co., 450 West Fort St., Detroit 26, Mich.

BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich.

GENTLEMEN:

Please send me _____ copies of "You'll Love This One" at \$1.50 per copy. Check enclosed. Please bill me.

Name _____

Address _____

City _____ Zone _____ State _____

1-14-52

AVAILABLE FOR LICENSING OR SALE

Pat. 2,543,889. Quick-Freezing Machine. Patented March 8, 1951. Quick freezer for food, especially fish. An insulated frame supports a freezing compartment in which a series of superimposed shelves are mounted to support trays. The shelves have parallel tubular spaces through which a refrigerant is circulated. A stream of air is circulated in a sinuous path along upper and under sides of shelves. Fins on the tray covers and on the under side of shelves run parallel to the current of air. Modification given.

(Owner) Fresh Frozen Foods, Ltd. Correspondence to Michael B. Striker, 511 Fifth Ave., New York 17, N. Y. Groups 30-37; 35-36, Reg. No. 44,967.

2,557,705. FLUID CONTROL VALVE WITH SELECTIVE FLOAT POSITION. John H. Edman, Dubuque, Iowa, assignor to Deere Mfg. Co., Dubuque, Iowa, a corporation of Iowa. Application May 4, 1950, Serial No. 186,077. 7 Claims. (Cl. 68-4.)

1. A fluid-pressure control valve assembly comprising a casting having a valve bore, a fluid inlet leading to the bore, first and second motor ports leading from the bore, an exhaust passage, and first and second exhaust ports leading from the bore to the exhaust passage; first and second check valves respectively in the motor ports and normally closed against return fluid; a control valve member in the valve bore having a neutral position in which the check valves are closed and the inlet is led to the exhaust passage; said member being shiftable in one direction from said neutral position to a first active position in which the inlet is disconnected from the exhaust passage, the first motor port is disconnected from the exhaust port, and the second motor port is connected to the inlet and disconnected from the second exhaust port; said member being selectively shiftable in the opposite direction from said neutral position

Pat. 2,555,425. Combination Beverage Display and Refrigerating Unit. Patented June 5, 1951. A portable, tiered, step-like structure has a series of openings in each surface level. A refrigerating coil surrounding each receptacle is supplied with a cooling medium from a central condensing unit. An insulating material of spun glass surrounds the receptacles and coils. An inclined sluiceway beneath the receptacles receives the condensate therefrom and delivers it to a removable drip pan at bottom of device. May be made of plastic and galvanized sheet metal. (Owner) Morris Stern, 725 Philadelphia St., Indiana, Pa. Groups 33-37; 34-35; 35-36; 39-41. Reg. No. 44,975.

NARDA Awards Recognize Dealers Who Lead In Raising Standards, Better Cooperation

CHICAGO—The National Appliance and Radio Dealers Association is honoring 49 of its members at the association's annual convention at the Conrad Hilton hotel. Awards of Merit and Gold and Silver Certificates are being presented to the men at the annual banquet in the Grand Ballroom of the hotel Monday, Jan. 14.

In announcing the awards, H. B. Price, Jr., national chairman and NARDA vice president, said:

"These members of NARDA have played a leading part in the crusade for higher standards in their industry by working for better understanding and fuller cooperation among the nation's retailers. Appliance and television dealers throughout the country owe a debt of gratitude to them for their diligent efforts and the fine example they have set."

Receiving the Award of Merit, highest honor bestowed on its members by the association, are:

Gross Williams, Jr., Shreveport Refrigeration Co., Shreveport, La.;

PARTS JOBBERS

Have you any one item that sells a host of other units? If you can answer YES, then we know you are handling Motor $\frac{1}{2}$ to $\frac{1}{2}$ hp.—101-D Adapters; and we know also, they are selling motors, belts, pulleys, controls and other allied items for you.

Engineering Research Associates Inc.
3475 East Nine Mile Road
Hazel Park 7, Michigan



J. R. Westwood, Westwood's, Billings, Mont.; P. S. Urner, Urner's, Inc., Bakersfield, Calif.; Robert Silk, Jr., Patrick & Silk, Newport News, Va.; A. S. Koenreich, The Eclipse Electric Co., Canton, Ohio; William S. Hake, Nelson's of Jamestown, Jamestown, N. Y.; Clarence Bode, J. Kornely Hardware Co., Milwaukee.

Winners of the second highest award, the Gold Honor Certificate, are: Karl Daubert, Daubert Electric Co., Louisville, Ky.; Joseph Fleischaker, Electric Appliance Stores, Inc., Louisville; Wendal Lewis, Northern Supply Co., Milwaukee; Jack Westley, Northern Supply Co., Milwaukee; Joseph A. Booth, Booth's Radio & Appliance Co., Bakersfield; and John Gray, Gundlach Plumbing & Sheet Metal Co., Bakersfield.

Other Gold Honor Certificate winners are: Harold Wright, Nu-Enamel Shreveport Co., Shreveport, La.; Lloyd Bell, Feller-Bell, Inc., West Palm Beach, Fla.; Frank H. Ruth, Cope Electric Co., Alliance, Ohio; James E. Thatcher, Grove Refrigeration Co., Alliance, Ohio; Herman Estrade, Estrate Appliance & Furniture Co., New Orleans; Henry Glindmeyer, George's, New Orleans; Otto C. Benjamin, DeWaard Electric Co., Grand Rapids, Iowa; Vergal Bourland, Vergal Bourland Appliances, Fort Worth, Texas; and Roy Firebaugh, Roy's Appliances, Beloit, Wis.

Other winners are: Paul Detting, Detting & Co., Jackson, Mich.; M. A. Hill, Warren County Hardware Co., Bowling Green, Ky.; Wallace Johnston, Wallace Johnston Appliances, Memphis; Frank Oates, S. H. George & Sons, Knoxville, Tenn.; Wally Wiss.

TRENTON, N. J.—Otto J. Nussbaum has been appointed chief engineer of the Kramer Trenton Co. here, it was announced by company officials.



'SMOKE SQUIRT' FEELS HE GOT VIP TREATMENT

Koch Refrigerators, Inc.
North Kansas City, Mo.

Editor:

You and the boys in the office must have me confused with someone else. I don't know what I did to deserve it, but you certainly have given me the old VIP treatment in AIR CONDITIONING & REFRIGERATION NEWS since the Show. I haven't been so royally treated in print since the days when playing football for free was fashionable.

Believe me, it's a lot easier by far to squirt a little smoke at the public than it is to push the pigskin.

Seriously, if the fellows in the audience got as much out of my presentation as you obviously did, I will feel that I've made a real contribution to the industry. Thanks a million for helping spread the word.

above, as no one has complained to us that they did not receive an increased amount of "Freon-11" or "Freon-12" in proportion to the production increase of carbon tet, but this is merely to go on record.

It was nice to have seen you in Chicago and to have attended the various meetings and exhibition, which clearly indicates that the industries which we serve have certainly grown in the last 20 to 25 years.

R. J. THOMPSON

NEW PRODUCTS?

Turn to "What's New" Page for useful information on new products. Use Key No. for fastest service.

NEW WARREN L MODELS MAKE FROZEN-FOOD MERCHANDISING EASY



CAN DEHUMIDIFIER BE ASSEMBLED BY DISABLED?

1216 South Jefferson
Springfield, Mo.

Editor:

The Wall Street Journal has referred me to you as a possible source for the answers to some questions I have about the dehumidifier.

A disabled veteran myself, I am trying to initiate some plan that will provide employment for the disabled in this area.

Having read about the dehumidifier, I wondered about its possibilities. Perhaps an assembly plant operated by the disabled.

With your knowledge on air conditioning and refrigeration—I would appreciate it very much if you could answer for me any of the following questions.

(a) Would disabled men be able to assemble the mechanism?

(b) How heavy are the parts they would have to lift?

(c) How much technical knowledge is necessary?

I would also appreciate and be thankful for any of your own suggestions or general information regarding the assembling and distribution of the dehumidifier.

JOHN MACIOCE

THIS is Warren's new super merchandiser of frozen foods: Model L-10, eleven cubic feet; it is also available in a 5.5-cu.-ft. size, Model L-5. Liberal storage capacity makes these self-contained, space-saving new models dependably economical.

The handsome white canopy is fitted with color photographs (beautifully lighted from rear) of tempting dishes prepared from well-preserved frozen foods—a compelling urge to select freely from the attractive display.

Both sizes of this Warren model have been a sensation wherever shown or used. Compact and on permanent casters for quick change of location, they are "at home" selling varieties of frozen foods anywhere in any store. Just plug them in. They are extremely popular for frozen-juice concentrates.

The Warren L Models are the easy, economical way to extra earnings from frozen foods. For additional information, write THE WARREN COMPANY, Incorporated, P.O. Box 1436, Atlanta 1, Ga.



AIRO SUPPLY CO.
2732 N. Ashland Ave., Chicago 14, Ill.

M-H Opens New District Office at Harrisburg, Pa.

MINNEAPOLIS—A new district office was opened at Harrisburg, Pa., recently by Minneapolis-Honeywell Regulator Co.

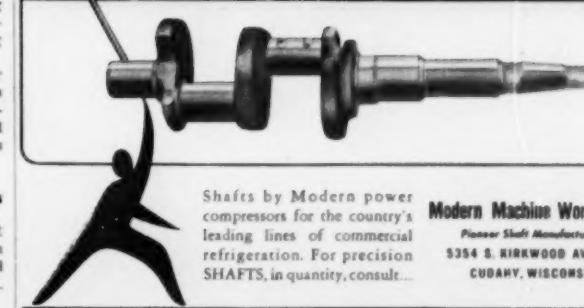
The new office, located in the Kline Village development, was made necessary, Honeywell officials said, by an increasing demand in the Harrisburg area for process measuring and controlling instruments and for heating and commercial controls.

William J. Brosch and Jack Taylor will handle sales for the company's Brown Instruments Div. John Hopkins will handle commercial, and Donald Schmick heating controls divisions sales.

A. H. Witt Co. Moves

LOS ANGELES—The A. H. Witt Co., manufacturer of refrigeration and air conditioning coils, has moved to a new factory and office at 941 N. Orange Dr., Los Angeles 38.

SHAFTS by MODERN





WESTINGHOUSE DEHUMIDIFIER has capacity for removing 3 gals. of water per day.

Dehumidifier --

(Concluded from Page 1, Column 2) where excessive moisture is a problem, Hildreth added.

Operating on the principle of an air conditioning unit, the dehumidifier traps water just as the outer surface of an ordinary glass of cold water does on a warm, humid day.

Air is drawn into the unit by a fan and passed over a copper-tubed evaporator, Hildreth explained. Excess moisture in the air condenses on the cold copper tubes and drains off into a 12-qt. bucket at the rear of the unit. The dried air is then blown back into the room. If desired, the condensed water can be piped directly to a floor drain.

The Westinghouse air drier is large enough to dehumidify an enclosed space up to 10,000 cu. ft. Requiring no special wiring, plumbing, or permanent installation, the unit can be plugged into any conventional 115-volt a.c. outlet.

For areas where relative humidity conditions do not require continuous operation of the dehumidifier, there is a timer clock available, as an accessory. This clock turns the unit on and off for predetermined periods each day. The clock will be sold at a suggested retail price of \$9.95.

The steel-cased unit is finished in blue-grey enamel. It weighs 100 lbs. and can be moved to various locations in a house as desired. It is 24 in. high, 14 in. wide, and 19 in. deep.

The dehumidifier is available now at regular Westinghouse appliance dealers. It is sold at a suggested retail price of \$151.50.

Appliance Plants --

(Concluded from Page 1, Column 3) additional sales personnel and additional talent at top levels.

He is optimistic about the future, however, for three reasons:

(1) The refrigerator, washer, and range are three solidly entrenched products which provide a substantial, stable base for the industry.

(2) Low-saturation items like freezers, dishwashers, and clothes dryers have tremendous growth possibilities.

(3) Our population is expanding so rapidly that the markets for all home products should get better and better.

With the erection of a 1,000,000-sq. ft. factory at 95th St. and Harlem Ave., some 20 miles from the Chicago Loop area, Hotpoint will complete its \$60,000,000 postwar expansion program. Nance confidently predicts that Hotpoint will become the biggest integrated producer of appliances in the world. In addition, one plant under his direction is to be the production of aircraft jet engine components.

Ed Taylor, Hotpoint's vivacious vice president in charge of sales, avers that dealers who gear their thinking to a "shortage" philosophy will be caught short. Although some items may have a waiting list in the first six months of 1952, he anticipates a healthy buyers' market for July onward.

Taylor predicts that refrigerator sales can be maintained at 4,500,000 units almost indefinitely if dealers continue to sell them aggressively. Even better profit possibilities can be found in freezers, garbage disposers, dishwashers, driers, and other "newcomers," he believes.

"These 'growth' appliances will require the same sort of educational and specialty selling methods that pushed the electric refrigerator into the big business bracket," Taylor insists.

Detroit Code--

(Concluded from Page 1, Column 4) similar in many respects to the B9 code, but never before has the city adopted the ASA code in toto and by reference. Two additions to the B9 code, however, have been included in Detroit's ordinance.

One requires that solder with a melting point of at least 1,000° F. be used for soldered joints in copper tubing in all systems except self-contained units with less than 6 lbs. of a Group 1 refrigerant in institutional and public assembly occupancies, and in all systems containing more than 20 lbs. of any refrigerant in other types of occupancy.

The other requirement calls for a discharge check valve in the discharge line from each compressor on a system containing more than 40 lbs. of a Group 2 or Group 3 refrigerant.

Few changes other than rewarding appear in the administrative section of Detroit's new ordinance.

More experience than previously required, however, will be asked of applicants for contractor's licenses. Up to now an applicant must have had three years' actual experience, or be a graduate refrigeration engineer with one year's experience or service before he could qualify for the written and oral examinations.

Now, the three-year requirement will still be necessary for a Class A license to install and service self-contained domestic boxes, but four years' experience will be needed for a Class B license (limited to systems not exceeding 7½ hp.), and five years for an unlimited Class C license.

Further, a minimum of two years' actual experience instead of one will be required of all applicants with the provision that credit varying up to a maximum of three years will be given to any applicant who is a registered professional engineer, or has at least a bachelor's degree in mechanical or chemical engineering, or is a graduate of a refrigeration trade school.

Another basic change in the new Detroit code is the classification of systems by horsepower.

Where the Class B license, for example, was formerly limited to "5 tons," now it runs up to "7½ hp." As for the systems themselves, Class A was previously 1 to 5 tons; is now "1½ to 5 hp." Class B was 6 to 10 tons; is now "6 to 50 hp." Class C was over 50 tons; is now "over 50 hp."

Amana Freezers --

(Concluded from Page 1, Column 4) ance ratings put Amana on top in terms of fast freezing and low current consumption.

It was also announced that in each of the last three years Amana has doubled its business over the preceding year.

Foerstner is more optimistic about the materials situation for 1952 than most manufacturers, and cites slowness of military procurement procedures as the basis for his belief.

He also took great pride in the fact that freezer sales passed the million mark in 1951.

Analyses of Amana sales indicate a healthy all-year market. The lowest month accounted for 6% of the total; the highest, 11%. Average unit of sale was \$510, and not one trade-in was registered. Specialty appliance dealers accounted for the most volume of all types of outlets. Department stores ranked a poor last.

Noting that some 3,725,000 freezers have been sold to 40,820,000 wired homes, Hinckliff pointed out that the market saturation is only 9.25%, which augurs well for the future of the business. He also noted that 7,200,000 frozen food lockers are in use.

Sam Holliday of El Paso, Texas, scored a big hit with his presentation of a frozen food sales plan. Having made arrangements to buy food at wholesale for his freezer customers, Holliday includes the family's food bill in its monthly payments on the freezer. He insists that the freezer owner can save \$4,800 in food costs in 10 years with this plan.

He does all his selling at night, in home visits to husband and wife at the same time.

Merlin Morris, advertising manager, presented an unusually complete direct mail and promotion package. Amana also will advertise in *Life*, *Better Homes & Gardens*, and other magazines, and has a virtually unlimited cooperative newspaper program.

Hotpoint '52 Major Appliance Line--

(Concluded from Page 1, Column 3) freezer (EK11-6), the 1952 line also includes 15 and 23-cu. ft. freezers (EK15 and EK23). The 11-ft. freezer gives large capacity in a popular size bracket, yet takes up less space than former comparable models, Hotpoint said. The freezing unit is now located beneath the cabinet.

The freezer control is placed at the back of the cabinet near the top where it can be easily seen and reached. The appliance has a porcelain enamel liner with a light gray speckled finish.

The three freezers are equipped with storage baskets, automatic temperature control, interior light, alarm signal light, and vacuum sealed freezing unit.

The EG106 refrigerator has separate doors to the freezer and refrigerator compartments, as well as wider and deeper shelves in the door to the refrigerator section.

Deluxe combination models have eight different food preservation zones which include the frozen food section, fresh food storage, door shelves, butter conditioner, high humidity storage, left-over rack with covered jars, tall bottle zone, and meat storage.

The refrigerators having door shelves are called "Super-Stor" models and are available in both the combination and the single door type. These have been designed to place more than 70% of the contents in the front of the box.

All 1952 models have an automatic door latch that "pulls the door tightly shut, eliminating the necessity of

slamming it," the company said.

Other "Super-Stor" models are the ED87 and the ED110, which are equipped with horizontal frozen food compartments in the top. Capacity of this compartment is 43 lbs. for the 8.7-cu. ft. models and 49 lbs. for the 11-ft. models.

Highlights of the automatic home laundry equipment are a "moistureless" electric clothes drier and an automatic washing machine, both appliances matching each other in appearance.

Hotpoint said the drier "eliminates the discharge of steam and lint in the laundry room, while the washing machine is completely automatic, yet allows the user to continue her own established methods of washing clothes."

The automatic drier (model LD-3) has a new dial that includes a 60-minute cycle for ordinary drying loads, and an additional 30 minutes for clothes that are washed in wringer-type machines, "with a greater amount of water retention."

Company officials point out that for normal washing that is done in an automatic appliance, the drying time rarely exceeds an hour. However, they say, many women use an automatic drier with conventional washers which do not expel as much water in the wringing process as automatic spin driers do.

The automatic washing machine (model LC-3) has a single control dial. This appliance gives complete automatic performance at the setting of the dial, but the user can select any quantity of water and also the

temperature of it, depending upon the amount of clothes to be washed, according to the company.

When placed side by side, the two appliances take up a space of about 56 in., it was noted.

Hotpoint is also showing automatic food waste disposals in standard and pre-plumbed models with combination drain safety lock and sink stopper and a non-clogging mechanism.

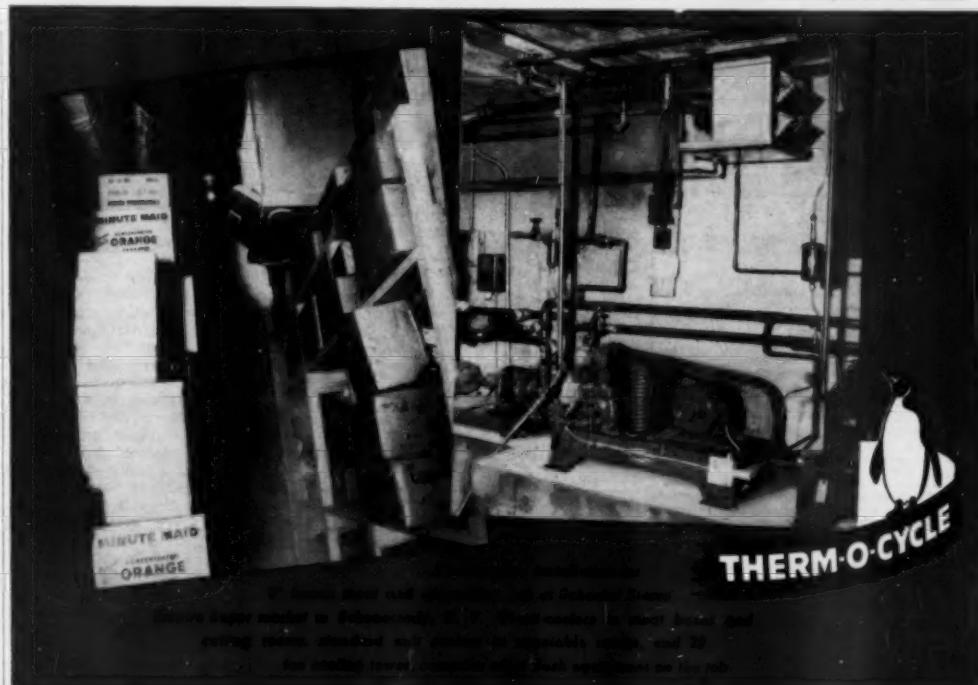
Engineering improvements in the new "Disposals" (MW8 and MW8P) include reducing the appliance to 15 in. in depth; hard steel shredders that rotate in either direction to prevent clogging and increase the life of the working parts; smoother exterior with all wiring concealed; and attachments that simplify installation with existing plumbing, the company said.

Hotpoint automatic electric water heaters come in 10 different models and are equipped with a temperature control dial.

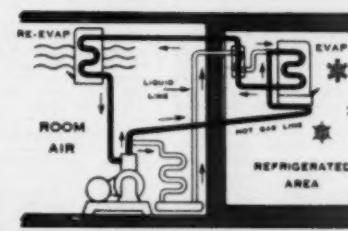
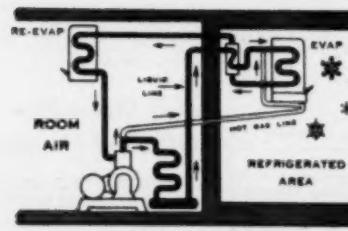
The 1952 heater models range from 30-gal. sizes in counter top and cylindrical styles to 82-gal. capacities. Counter top water heaters in 30 and 40-gal. sizes match other cabinet height appliances for kitchen or laundry installation.

Dial controls enable the user to adjust water heater temperature to his own needs. The dial has three settings—"vacation," "average," and "extra hot."

Also being shown are two new electric ranges with lighted push-button controls for surface units and ovens, and new automatic dishwasher models incorporating engineering improvements. These models were described in the Dec. 31 issue of the NEWS.



ROOM AIR...TO DEFROST

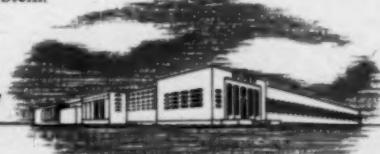


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